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## ORIGINAL LECTURES.

### ALBUMINURIC RETINITIS.

*One of the Course of Evening Lectures delivered at the Philadelphia Polyclinic.*

BY EDWARD JACKSON, A.M., M.D.,  
PROFESSOR OF DISEASES OF THE EYE.

THIS subject, besides its very general and important practical interest, is especially attractive, because it well illustrates the value of the ophthalmoscope as an instrument of diagnosis in general or constitutional diseases. The ophthalmoscopic changes that mark this affection are striking and, in the majority of cases, can scarcely be mistaken for anything else.

#### PATCHES OF FATTY DEGENERATION.

The most constant and characteristic appearance presented is that of white spots, caused by fatty degeneration of portions of the nerve-fibre and inner molecular layers of the retina and of masses of exudation occurring in these layers. You know that the normal retina is transparent, and that with the ophthalmoscope we see through it back to the pigment layer and the capillary layer of the choroid, which give the red color of the fundus-reflex, the only visible structures in front of these being the retinal vessels. When, however, the nerve-fibre and adjacent layers of the retina (they being the inner layers of that membrane, the layers next the vitreous and nearest the observer) become the seat of opaque exudation or undergo the change that replaces their proper tissue by emulsified fat, nothing beyond them can be seen, and the general red of the eye-ground is interrupted by a white spot. These white spots are at first usually small, discrete and most numerous in the region of the macula lutea and its immediate neighborhood. As the case progresses, they become larger and more numerous; and often in the region of the macula they run together, forming large masses, which have a somewhat stellate outline.

The location of the spots, or of the opacity causing them, may be ascertained by the partial concealment of the retinal vessels caused by them. These vessels lie for the most part in the layers involved, sometimes absolutely superficial, sometimes buried more or less deeply in their substance. When one of them passes across an area of retina thus altered, if on the surface, it will remain visible, and be all the more noticeable for its brilliant white background; but if it dips below the surface in such an area of opacity, it will at once be lost to sight. The only other condition concealing parts of the retinal vessels, and presenting an appearance at all similar, is that of persistent nerve-sheath. Here the opacity is in the same layer, and consists of a material physically very similar; but the distribution of the spots is entirely different. In this congenital anomaly they are of com-

paratively large area, never more than three or four in number, often but a single one, and they almost invariably begin at the margin of the optic disk and stretch off from it in the direction or directions of the distribution of the larger masses of nerve-fibres, ending in a "feathered" or not sharply defined edge; while, on the other hand, the lesions we are now considering involve small spots, are most numerous at the macula, although they may be scattered over the whole of the visible fundus, and have edges either sharply defined or clouded by retinal cedema, which gives an appearance quite different from that of the "feathered" edge.

These white spots are to be distinguished from those caused by lesions of the choroid by the entire absence of alterations in the pigment layer in the surrounding parts. If, in this affection, alterations in the distribution of pigment do occur, they lie beneath the more superficial opacity, and are entirely concealed by it.

There is, however, one condition of the fundus oculi which even the experienced observer will have difficulty in distinguishing from the scattered small white spots of commencing or mild albuminuric disease.

In this condition, which is perhaps (like albuminuric lesions) more frequent after middle life, there are very many small white spots, generally most numerous in the region of the macula or near the disk, but with a few scattered in other parts of the fundus. These spots are always small, seem to be due to choroidal change, and are of a rather yellowish-white. I am not certain whether there is any impairment of vision directly dependent on them or intimately associated with their occurrence.

They could not be mistaken for the appearances of a violent or advanced case of albuminuric disease; but it is sometimes very difficult to make sure that they are not the beginnings of such a trouble.

Curiously enough, a patient presented herself at the clinic to-day, with white spots in the fundus, the significance of which I could not, after careful ophthalmoscopic examination, certainly determine. In this case the spots are largest and most numerous some distance above and below the disk and macula, instead of in their immediate vicinity; and while some of them have the shining white color of the retinal lesion, others are more of a yellowish-white appearance, such as the choroidal spot presents. None of them is crossed by vessels large enough to be visible, and there are no hemorrhages or spots of pigment disturbance or other appearances to aid in deciding the question. We shall have to keep this woman under observation, and by further developments within the eye, or the study of other organs, will be able to arrive at a conclusion. (She was subsequently found to be suffering from albuminuria.)

The white spots of retinal degeneration are not confined entirely to albuminuric disease, but they are found in leukemic retinitis also; and in some cases of violent

neuro-retinitis connected with coarse disease of the brain; but in these other conditions the white areas are rarely, if ever, the most notable ophthalmoscopic symptoms, while in albuminuric disease they are usually the most prominent and, not rarely, the only local evidence of disease, and on finding them in any given case, the first thought would be of renal-vascular disease. When these spots once appear they rarely disappear or even diminish. There is very little tendency to regeneration of the tissue, except when the lesion occurs during the albuminuria of pregnancy.

#### HEMORRHAGES.

Next in importance to the white spots are the extravasations of blood into the substance of the retina. Unlike the former, these are not lasting, but in a few days, or a few weeks, any particular hemorrhage will be absorbed and will leave either no visible trace, or simply a white spot of fatty degeneration. It is not to be supposed, however, that all the white spots, or even the most of them, result from hemorrhages. The extravasations vary in size, from areas larger than the optic disk to the smallest speck visible by the direct ophthalmoscopic examination. In searching for them it would not do to rely on the inspection of the inverted image. Cases of unmistakable albuminuric retinitis are not rare that might, by the indirect method, be readily overlooked. Hemorrhages are most numerous toward the posterior pole of the eye, in somewhat the same proportion as that region is more richly supplied with bloodvessels.

The larger hemorrhages almost always lie partly in the nerve-fibre layer, in which the extravasated blood tends to make its way between the bundles of nerve-fibres, causing the appearance of striae, alternately white and dark red, extending in the direction of the fibres. Such hemorrhages are often spoken of as "flame-shaped," and by their appearance and distribution, in connection with the white spots, they form a picture which reminds one of the common representation of an explosion, a radiating cloud in which each object is fringed with the same radiating lines, to show that it is flying off from a centre. The smaller hemorrhages often do not present any such striated appearances, being confined to the granular layers of the retina, in which are distributed the minute vessels from which they are poured out. The color of the extravasated blood is a dark crimson shortly after it has been poured out, becoming still darker as time goes on; but never entirely black, so that it would be mistaken for a deposit of pigment, or an opacity in the vitreous humor.

The hemorrhages are in no way characteristic of albuminuric retinitis, either in the fact of their occurrence or from any peculiarity of appearance or behavior. Hemorrhages, quite similar, are found in cases of severe retinitis or neuro-retinitis from other causes. Nor are they always present in albuminuric retinitis. Even when they have been present, they may have all disappeared at the time or times that the eye is examined. Their presence, or abundance, rather indicates that there is, or has recently been, an exacerbation of the inflammatory action; or that the local disease, at least, is rapidly progressive. Still, while the entire absence of hemorrhage would not exclude the presence of albuminuria and the conditions of which it is a symptom, in a case of retinal disease, the discovery of even a single patch of extrava-

sated blood should arouse our suspicion and induce a careful search for evidence of such a basis for the local trouble.

#### LESIONS OF THE VESSELS.

The simple failure of the vessels properly to retain their contents, in a situation so well protected from external injury as the retina, and where they have the external support of the intraocular pressure, must be taken as evidence of serious disease of their walls. Actual rupture, with the pouring out of contents, is commonly confined to vessels too small to be recognized with the ophthalmoscope; but localized dilatation of the larger vessels occurs. True aneurism of what can, from its size and connections, be certainly identified as a retinal artery, is probably quite rare. I have seen it in but one case; but a marked varicose enlargement of the retinal veins is common. This is often so great, as compared with the calibre of the undilated vessel, and the undilated portions may be so completely buried in the swollen retina, that it is very difficult to decide whether the blood to which a certain dark red patch is due, is contained in such a dilatation, or has escaped into the retinal tissue.

An extremely interesting condition of the vessels is that in which their walls have become, to a greater or less extent, opaque and white. This condition arises in the course of various affections involving the retina, but in none more frequently than in albuminuric disease. It may be brought about by an embolism or a thrombosis, as in a case I saw in Dr. Harlan's service at the Pennsylvania Hospital, two years ago, in which every part of every vessel, except one minute twig, had become a white band; but in other cases the change is confined to a limited portion of the vessel wall, and the passage of blood through it is not perceptibly interfered with. Here is a sketch (water-color sketches of the fundus oculi, giving the various appearances of albuminuric retinitis, and those that might be mistaken for it, were used to illustrate the subject) of the fundus of the eye of a patient who was in attendance here a few months ago, in which the inferior nasal branch of the retinal artery has walls of a brilliant opaque white for some distance from the margin of the disk, while beyond, the vessel presents an absolutely normal appearance. More frequent, still, is the condition in which the perivascular sheaths of the vessels become visible as a pair of, more or less pronounced, white lines running parallel to the vessel, close to it and sometimes widening out so as partially to conceal it.

#### FORMS AND PROGRESS.

It is convenient to speak of two forms of albuminuric retinitis, the degenerative and the inflammatory, although these are blended in the great majority of cases, and often one and then the other predominates at different periods in the progress of the same case. In the degenerative form the white patches, however numerous, are apt to be small and separated by spaces of apparently normal fundus; and if hemorrhages are present, they are similarly distributed. When this is the character of the case, and there is no sudden involvement of any large part of the macula, the impairment of vision is quite gradual, and the patient is likely to regard it as due to some senile change, requiring, perhaps, a special adjustment of glasses for its correction. The inflammatory form may be taken from the outset, but usually it is

assumed after some of the degenerative changes have occurred. And its appearance is often connected with some especial strain on the eyes, or with an acute exacerbation of the kidney trouble. The symptoms may vary from those of rapidly progressive degeneration, with some hyperemia, to those of the most violent neuro-retinitis, indistinguishable from neuro-retinitis arising from other causes. In so far as the case approaches the latter type, it exhibits oedematous swelling of the retina most marked in the region of the macula and disk. This swelling often buries and partially obscures the retinal vessels and patches of degeneration, giving the whole fundus a hazy and often dirty appearance.

#### TREATMENT AND SIGNIFICANCE.

The course of the retinal affection depends largely on the course of the general disease which causes it. Degenerative cases go more or less steadily, and more or less rapidly, from bad to worse; but useful vision is mostly retained until the close of life. In so far as the retinal lesion is inflammatory, it is liable to be aggravated by anything that causes an especial determination of blood to the organ, as use of the eyes, strain of inadequate accommodation or uncorrected errors of refraction or exposure to excessively bright light; and by greater care, in these directions, improvement in the local condition may be secured. When the inflammation, especially of the nerve entrance, has been severe, it is liable to be followed by atrophy, which causes partial or almost complete blindness.

The significance of albuminuric retinitis, as an evidence of the general condition of the system, however, is quite as important as its usual influence in impairing the function of the part involved. Its appearance may be regarded as certain evidence that the degenerative changes in the walls of the bloodvessels that occur throughout the system in connection with the chronically contracted or granular kidney are far advanced; and that, except in the albuminuria of pregnancy or scarlatina, the fatal termination is not likely to be very long deferred; not that albuminuric retinitis is strictly confined to this form of kidney disease, but when it occurs in connection with the large white or the lardaceous kidney, it will be found that the vascular condition, local and general, is markedly that which is so closely connected with the slowly contracting kidney. In so far as it is possible for any one symptom to be regarded as pathognomonic, we may so regard this one of retinitis albuminurica. While albumin may sometimes be found in the urine, sometimes be absent, the white patches in the retina, once formed, remain always; and anything like the typical appearances of this affection, in the eye of a person not suffering from Bright's disease, is certainly more rare than albuminuria in perfect health. Of those who come to us with this form of retinal disease, about 60 per cent. die within the first year after its recognition; at the end of two years, 85 or 90 per cent. are dead; and scarcely one in fifty lives to the end of five years. One observer reports that of over one hundred cases of which he had followed the history, all had died within two years from the time they were first seen; but, although the retinal lesion is certainly not incident to an early stage of the morbid process, it is very often the first symptom to arouse a suspicion of the real basis of an indefinite, though often prolonged, impairment of the general health.

#### ALBUMINURIC RETINITIS DURING PREGNANCY.

Occurring in this connection the disease differs as to its prognosis and significance from the account that has just been given; but this difference may be seen to depend directly on the temporary nature of the cause of the albuminuria; and the great capacity for the regeneration of tissue exhibited upon the termination of pregnancy. So long as pregnancy continues, the prognosis, both as to vision and as to life, is much the same as it is in the same conditions arising independently of pregnancy; the retinal process tending, if anything, more toward the inflammatory type; with an especial liability to subsequent partial or complete loss of sight by atrophy of the optic nerve; but when the pregnancy ends, either at term or prematurely, the whole aspect of the case changes. Not only is it probable that the kidneys will resume the normal performance of their functions and the danger to life be averted, but the retinal oedema will clear up, the white patches will begin to fade away and perhaps disappear entirely; and the vision, though very greatly impaired, will improve, at first rapidly, then more slowly, and after a while will be found, perhaps, up to the full normal standard.

On account of the complete reversal of the prognosis as to vision wrought by the expulsion of the product of conception, the question has within a few years been raised and considerably discussed: Are we in this affection justified in inducing premature delivery for the prevention of what is likely to be permanent blindness? and almost every one who has written on it has answered it in the affirmative; but we must remember that most of those who suffer from albuminuric retinitis die before the local disease has time to destroy useful vision; and although as it occurs in pregnancy, the danger may be relatively somewhat greater for sight, still the relation between the prognosis as to vision and the prognosis as to life is intimate. What affects the one will affect the other; and in the great majority of cases, the necessity of resorting to extreme measures will rest on the peril to life, which must be regarded as imminent whenever severe albuminuric retinitis exists. If a case should arise in which blindness was threatened without serious risk to life, the decision as to the induction of premature labor or abortion, would probably have to be made on grounds peculiar to the individual case.

### ORIGINAL ARTICLES.

#### FOUR SUCCESSFUL CASES OF LITHOLAPAXY IN BOYS.

BY DUDLEY P. ALLEN, M.D.,

LECTURER ON SURGERY IN THE MEDICAL DEPARTMENT OF THE WESTERN RESERVE UNIVERSITY.

FOR the successful performance of litholapaxy upon boys, and its introduction as a safe operation, we are indebted to British surgeons in India. One year ago, the operation had been rarely performed, if at all, in Europe. Instruments were difficult to get, and those manufactured by the celebrated firm of Weiss & Son, of London, had gone chiefly to India.

In January of this year (1888), lithotrites suitable for crushing vesical calculi in children were ex-



hibited in the Surgical Section of the Academy of Medicine in New York, by Dr. R. F. Weir, as a curiosity. Since then the operation cannot have become a very common one in the United States, the report of several successful cases, and remarks upon them, may be of interest. Three operations were upon boys who had not yet reached puberty.

The details of the operations are, in brief, as follows:

**CASE I.**—James M., æt. thirteen and a half years. Has been twice cut for stone. In March, 1884, one stone was removed. In April, 1886, two stones were removed. About one year after the second operation, began to suffer again with symptoms of stone. The suffering was so intense, at times, that the screams of the boy could be heard through the neighborhood.

*Feb. 27, 1888.* Performed litholapaxy, removing a phosphatic stone. The stone, being soft, was crushed with ease. Weight 80 grains. Largest diameter, as measured by lithotrite, one inch. Dr. A. J. Cook, who kindly invited me to perform the operation, and who cared for the patient subsequently, reported the next day that the temperature was  $98\frac{1}{2}^{\circ}$ . Slight local tenderness. Patient passed water without difficulty, but when desire occurred must micturate at once.

Two days after the operation, I found the patient eating a hearty supper and feeling well. Up to the present time (August, 1888), there have been no recurring symptoms of stone and the urine is normal.

**CASE II.**—Paul S., æt. fifteen years. Not yet reached puberty. For three years, patient has micturated frequently, and of late suffered considerable pain.

*May 30.* Performed litholapaxy. Stone was of uric acid and very hard. Its largest diameter, as measured by the lithotrite, was one inch. Weight 32 grains.

The specific gravity of the fragments being high, the washing was slow and laborious.

Operation was performed without any difficulty. My friend, Dr. Sihler, who sent me and cared for the case, reports that the day following the operation a few grains of fine sand were passed; that the patient suffered very slightly from the operation and that now he is perfectly well.

**CASE III.**—Albert S., æt. thirteen years; has suffered from pain in the region of the bladder for about five years.

*Aug. 1.* Performed litholapaxy. Largest diameter of stone, as measured by lithotrite, was one and one-quarter inches. Composition urates and phosphates. Weight of stone 145 grains. A considerable stricture of the urethra was found at the pubic arch, and great difficulty was encountered in passing instruments and considerable force was required for their insertion.

Aside from this, the operation was performed without accident. One hour after the operation, the boy was begging for his dinner. At no time did he require any anodyne, and the next day felt in excellent condition. The first time he urinated a very little sand was passed.

**REMARKS.**—The interest in the above operations is dependent on the fact that the instruments employed were of the calibre of No. 18 French. The difficulty of the operation depends upon the fact that the fragments of stone must be evacuated through so small a tube. It will be remembered that litholapaxy was first considered practical after Otis had demonstrated that the normal male urethra would admit a tube of a size of No. 30 and No. 32 French and even larger. At this time, the operation was considered inapplicable to boys who had not reached a development sufficient to admit large instruments.

When lithotrites are reduced to the size of No. 18 French, it is evident that more time will be required to crush with them a stone of a given size than would be the case with a larger lithotrite. There is another difficulty: if a lithotrite be constructed with flat blades, as is common in most lithotrites, impaction becomes possible. Should this occur the calibre of the lithotrite would be increased so that on withdrawal the urethra might be lacerated, since it is very tender in children. On this account it has been thought necessary to construct the crushing portion of the female blade like a loop, so that the male blade may pass entirely through it, coming out flush with the heel of the lithotrite. Though this form of blade is no hindrance in crushing the first part of the stone, while the fragments are still large, it gives rise to very great delay in crushing the small fragments remaining toward the close of an operation. The reason for this is that these fragments, though too large to pass through the evacuating tube, are still small enough to be pushed through the fenestra in the female blade.

To overcome this difficulty, we have found it a great assistance to crush the fragments remaining at the close of each operation with a lithotrite having a flat, unfenestrated female blade. We have not used it long without withdrawing it, and in each case have succeeded in screwing the male blade well home, so that no difficulty has been encountered in the withdrawal of the instrument. The lithotrite with fenestrated blade which we have used for the main part of the crushing was made for us by Codman & Shurtleff, of Boston, under the skilled supervision of Dr. Arthur Cabot, the associate of Dr. Henry J. Bigelow, and does its work admirably.

The flat-bladed instrument used at the close of each operation was made for us by Weiss, of London, after a model of Sir Henry Thompson's. Weiss &



Son are now manufacturing for boys a lithotrite with a shorter shank, which is considered more convenient.

In comparing litholapaxy with lithotomy the questions which arise with reference to its advantages or disadvantages are: (1) Is it safe? and, (2) Are its results as good?

Of the safety of the operation there can, I think, be little doubt, provided it is in skilful hands. Litholapaxy undertaken by an operator who is not conversant with its details and dangers, especially if he is not skilled in the manipulations of urethral and bladder instruments, must in all cases be a dangerous operation. If a surgeon possesses the skill requisite for the performance of the operation in adults, there is no reason why he should not succeed in children. To be sure, the instruments are small and the mucous membrane tender.

In the three operations just recorded, the water was scarcely more than tinged with blood. If there be danger in boys from the tenderness of the mucous membrane, this is more than counterbalanced by the fact that the kidneys are not often diseased, nor is the bladder so frequently rendered abnormal by the presence of sulci and projections. One very decided advantage over cutting is that the recovery is much more rapid, being complete, as a rule, in a few days, whereas the care of the patient amounts to nothing when compared with the foul and revolting bed of a patient on whom lithotomy has been performed, with the persistent eczema which often results from a long-continued discharge.

Whether the cure is as permanent as that resulting from lithotomy cannot be so positively answered. In one of our cases, lithotomy had been twice performed before we performed litholapaxy. Now, after almost six months, the urine is perfectly normal. We certainly can have no worse success than that which followed the cutting operation. Another case has recently come under our observation of the return of a stone in a boy after lithotomy. There are many such cases.

If the operation be desirable in adults, there is greater reason why it should be successful in boys. If it must be repeated, three or four litholapaxies cause far less pain and loss of time than one lithotomy; besides, the size of the urethra is constantly increasing with increasing age, rendering subsequent operations more easy, provided they should be required. It would not seem probable that stones would be reformed more frequently in boys than in adults, since their urinary tracts are certainly less liable to be in a seriously diseased condition such as renders them liable to the formation of calculi. What the tendency to the reformation of calculi may be can only be determined, positively, by a record of many cases.

In a word, then, we consider the operation of litholapaxy in boys a safe one in skilled hands.

The operation is less severe; the care of the patient is vastly less; and the recovery is much quicker than in the operation of lithotomy. We believe the cure to be permanent.

CASE IV.—This has nothing in common with the preceding cases, but is of interest in itself.

James B., æt. nineteen, some eight months since, ran a piece of chewing-gum into his urethra. This got beyond his reach and worked its way into his bladder. A calculus formed about this as a nucleus, and on January 19, 1888, we performed on the patient litholapaxy. For this we used the instruments suited to adults. The difficulty of the operation consisted in the fact that the chewing-gum constantly impacted the blades of the lithotrite, so that it was necessary to remove it frequently. All the fragments were, however, successfully removed, weighing 180 grains. The greatest diameter, as measured by the lithotrite, was  $1\frac{1}{4}$  inches.

We visited the patient the next morning and found him sitting up and about his house. He said that as soon as he became conscious, after the operation, he got up and passed his urine without difficulty and with little pain.

Through Dr. A. J. Cook, who kindly called us to operate upon the case, we learn that the patient has remained well since the operation.

#### SOME POINTS IN THE ETIOLOGY AND PATHOLOGY OF SUMMER COMPLAINT.<sup>1</sup>

By B. K. RACHFORD, M.D.,

ASSISTANT TO CHAIR OF PRACTICE OF MEDICINE AND DEMONSTRATOR OF BACTERIOLOGY IN THE MEDICAL COLLEGE OF OHIO.

1st. THE chief, if not the only direct, causes of summer complaint are abnormal intestinal fermentations of food stuffs.<sup>2</sup> The fermentations of this class are always caused by organized ferments, viz., bacteria.

2d. Summer complaint is a general term used to describe not a single disease, but quite a number of diseases, of which our present knowledge does not permit of scientific etiological classification.

Subsequent investigations will probably show that there are quite a number of pathogenic<sup>3</sup> bacteria, each capable of producing certain definite changes in food stuffs which will bring about characteristic symptoms.

3d. Summer complaint being of bacterial origin is, necessarily, an infectious disease. The infectious nature of this disease is well established by clinical

<sup>1</sup> Read before the Cincinnati Academy of Medicine, June 26, 1888.

<sup>2</sup> See Dr. Christopher's paper, read before the Cincinnati Academy of Medicine, February 6, 1888, and published in THE MEDICAL NEWS of March 3d.

<sup>3</sup> The term pathogenic is here used to mean a disease-producer, it matters not whether it acts directly or indirectly, or from without or within the body. This is not the accepted use of this term in bacteriology, but it should be.

testimony, and that all diseases embraced under this term "summer complaint" are not alike infectious is also clearly pointed out by clinical observation. There is, indeed, a very great difference in this regard. In the majority of instances, this element is so obscure that clinicians frequently overlook it; but in the small minority of instances, a variety of this disease prevails, which is so infectious that the most casual observer is struck by this characteristic.

This great difference in the degree of infectiousness of various types of this disease indicates that they are altogether different diseases, each having a germ peculiar to itself, and that there is a great difference in the facility with which these germs pass from host to host, for upon this must depend the degree of infectiousness of any parasitic disease. We are not at present able to trace the parasites from host to host, and cannot, therefore, speak with certainty upon the special characteristics of the germs which determine the infectiousness of these diseases; but there are certain facts and observations which throw some light upon this question.

A. These germs escape from the body in the discharges from the alimentary canal.

B. The germs of abnormal intestinal fermentation find their way into the intestinal tract chiefly, if not exclusively, through the food and drink of the child.

C. The germs of normal intestinal fermentation<sup>1</sup> readily find their way into the intestinal canal in other ways than through the food and drink. This is evidenced by the fact that the intestinal tract of the young infant fed exclusively on mother's milk—a sterile fluid—is filled with bacteria.

Now, if the pathogenic bacteria could live under the same conditions as the normal intestinal bacteria, they would, like them, have a universal distribution; and if the pathogenic varieties could as readily find their way into the intestinal tract of the infant as the normal varieties can, the human race would soon become extinct, the victim of intestinal disorders.

D. The germs of normal intestinal fermentation, since they are *always* present in the intestinal tract from the first to the last moment of life, must be universally distributed and have ready access to the intestinal tract. They can probably resist the cold of winter, can live in a state of desiccation and resist other destroying agencies to which known pathogenic bacteria succumb. They are found not only in the food and drink of the child, but on everything with which the child comes in contact. Nature has provided that these bacteria, so necessary to infantile digestion, shall have no difficulty in finding their way into the intestinal canal. If it were

possible to sterilize the intestinal tract, the next hour would find it filled with normal intestinal bacteria.

If, then, in our attempts to rid the intestinal canal of the infant of pathogenic bacteria, by giving antiseptic cathartics, such as calomel, we should also drive out or hinder the growth of the normal varieties, it would not interfere, to any appreciable extent, with digestion, since the calomel would soon disappear from the canal and the normal intestinal bacteria would again fill the intestinal tract. The pathogenic varieties, by reason of their feeble powers of resistance, would be much more readily destroyed and their subsequent entrance could be prevented by appropriate measures. These theoretical conclusions are, I think, amply sustained by clinical experience. For these reasons I think that Baginsky's<sup>1</sup> objection to the use of calomel is not a valid one.

E. The germs of abnormal intestinal fermentations probably cannot live in a state of desiccation, and must, therefore, like the typhoid bacillus, after leaving the intestine find a suitable nourishing material in which to live as a saprophyte till they accidentally find their way into the food and drink of the baby.

This accords with their limited distribution and comparative difficulty in finding an entrance into the intestinal canal, and explains why the abnormal varieties are more abundant in cities than in the country, since the conditions for the saprophytic existence of these organisms are rare in the country and everywhere present in the city. It also explains why the abnormal intestinal bacteria are not present to any appreciable extent except in warm weather, since the saprophytic existence of these organisms would be destroyed by the cold.

From these observations it follows that a cool climate, sterile food, sunlight, fresh air and cleanliness are the great prophylactic measures against this disease.

It is quite evident that sterile food has its great field of usefulness in the prevention rather than in the treatment of these diseases; for if we have an abnormal fermentation going on in the intestinal tract, producing disease, it matters not as to the continuance or activity of that fermentation, whether it be fed on sterile or non-sterile milk; either will feed the fermentation and continue the disease. I do not mean by this that sterilized milk is of no value as a food in summer complaint; it is of value in chronic cases and is indicated in all cases in which mother's milk would be indicated—that is, when milk does not aggravate the disease by feeding the fermentation which is the cause of the disease. If milk be given at all, sterile milk is much to be preferred, because of the possibility that other bacteria,

<sup>1</sup> The term fermentation is here used in a very broad sense to mean the changes, either directly or indirectly, produced by organized ferments by their growth or presence in any nourishing material.

<sup>1</sup> See Dr. Baginsky's paper published in *Deutsche medicinische Wochenschrift*, 1888, pp. 391 and 414.

more dangerous in their fermentation products, may be introduced and a more violent disease set up as a complication of the existing disease.

With these remarks on the etiology of summer complaint, let us pass to the consideration of a question concerning its pathology, viz.: How do bacteria act in producing this disease? In a discussion which was published in *THE MEDICAL NEWS* of March 10, 1888, I said, in answer to this question,

"Bacteria may act in three ways in the production of summer complaint.

"1st. The disease may be caused by ptomaines."

"2d. The disease may be caused by any of the many indigestible and irritating materials formed in the process of fermentation and putrefaction."

"3d. The disease may be caused by anything that interferes with the growth and development of the bacteria so necessary to infant digestion."

I am impressed at this time more fully than ever with the truth and value of these propositions, and desire to dilate on them, that their scope and application may be more fully understood.

In the consideration of these questions we will reverse the order of these propositions.

*In the first place, bacteria may cause summer complaint by interfering with the growth and function of those bacteria normally present in the intestinal tract and so necessary to infant digestion.*

It is the prevailing opinion among medical men at the present time that bacteria play a very important rôle in the digestive process, especially in infancy. They possibly act not only by producing soluble ferments, which change starch to sugar, albumens to peptones, fats to fatty acids and glycerin, but also as organized ferments, producing the normal fermentations of food stuffs in the intestinal canal.

In all probability, the younger the child the more dependent it is on bacteria for the proper execution of the digestive function.

It is a fact of common observation that different species of bacteria growing in the same culture material exert an unfavorable influence on each other; in other words, an antagonism exists, which results in the survival of the fittest.

With these facts in mind, it is easy to understand how bacteria which do not produce poisonous alkaloids or materials specially irritating to the intestinal mucous membrane may yet cause digestive derangement by killing out the bacteria of normal intestinal fermentation, and in that manner stopping the digestive process and causing the otherwise easily digested food now to act in its undigested condition as an intestinal irritant. That food ordinarily wholesome sometimes passes through the intestinal tract of the infant and appears in the stools is not alone a matter of theory but of frequent observation.

Overfeeding and feebleness of action on the part

of the digestive glands are probably too often invoked in explanation of this condition.

That this form of summer complaint is not similar to a simple intestinal irritation caused by taking indigestible food is plain to every one on reflection. In the latter, when the *indigestible* food or other materials have passed, the cause of the intestinal irritation has been removed and the child is practically well; but in the former, even after the *undigested* food has been removed, the cause of the trouble still remains—viz., the abnormal intestinal bacteria—to interfere with the digestive process and continue the disease. That the bacteria which produce summer complaint by the production of poisonous ptomaines or irritating materials may also act in this way goes without saying.

In my opinion, this cause is a factor in almost every case of summer complaint and is at times the chief, if not the sole cause of this disease. This, I think, is more likely to be the case in the milder acute as well as in some of the chronic forms of the disease.

It seems probable that this form of the disease may be a great predisposing cause to the other forms.

*In the second place, bacteria may cause summer complaint by the formation of irritating materials during the fermentation of food stuffs in the intestinal canal.*

This is probably the great cause of summer complaint. It is a factor in most of the cases and a chief factor in a great many.

Dr. Christopher, in his article on summer complaint previously referred to, makes two great clinical classes of this disease: "Those in which the intestinal fermentation is acid" and "those in which the intestinal fermentation is putrid."

In the large number of cases characterized by the acid fermentation, the symptoms are caused, not by poisonous alkaloids, but by irritating materials formed by an abnormal intestinal fermentation of carbohydrates.

In the still larger class of cases which are characterized by the putrid fermentation, as well as the groups of cases which have neither of these characteristics, we, in the majority of instances, do not have the slightest evidence of ptomaine poisoning; it is only in the minority of instances that this cause is active, and this is in accordance with our knowledge of the formation and physiological action of ptomaines, although the growth of microorganisms in albuminoid material probably always results in the formation of these bodies, yet it must be remembered that comparatively only a few are poisonous. The great majority of ptomaines are perfectly harmless; if this were not the case, we would have dangerous alkaloids constantly present in the intestinal tract, since the conditions necessary to their formation always exist there.



For these reasons,\* then, we conclude that the symptoms in those cases caused by abnormal fermentation of albuminoids are caused, in the majority of instances, not by physiological poisons, but by other irritating chemical materials formed from food stuffs during the fermentation.

*In the third place, bacteria may cause summer complaint by the formation of ptomaines which act as physiological poisons.*

This is the chief immediate factor in the production of the symptoms in quite a large number of cases in which an abnormal intestinal fermentation of albuminates is the cause of the disease; when this fermentation results in the formation of a poisonous ptomaine, we have the poisonous symptoms produced by the particular alkaloid formed so overshadowing all others in importance and violence that the ptomaine poisoning becomes for the time being the disease itself, to be met by prompt and appropriate treatment.

The characteristics of each case of this kind, not only as to symptoms present, but as to their violence, must depend on the quantity and poisonous properties of the particular ptomaine formed.

The three varieties of summer complaint which have been described may be spoken of in brief as, 1, bacterial indigestion; 2, abnormal intestinal fermentation; 3, ptomaine poisoning.

This classification, founded on their etiological and pathological characteristics, will, I think, be found of great value from a clinical standpoint, since the symptoms and treatment of each class must be radically different; but of this I shall have more to say at some subsequent time.

#### NOTES FROM A FOUR MONTHS' SURGICAL SERVICE AT THE ALBANY HOSPITAL.<sup>1</sup>

BY A. VANDER VEER, M.D.,

PROFESSOR OF SURGERY IN THE ALBANY MEDICAL COLLEGE; ATTENDING SURGEON TO THE ALBANY HOSPITAL, ETC.

##### TUMORS OF THE BREAST.

During my term of service twelve cases of new growth in the breast presented for treatment, of which seven were scirrhus carcinoma, three sarcoma, one lipoma and one cystic degeneration. In four cases there was evidence of heredity. Ten operations were done. Two cases of recurrent carcinoma were refused second operation. In four cases the axilla was invaded and glands removed.

I wish to describe somewhat fully the method which has been pursued in the operation and after-treatment of excision of the breast. After the usual laxative and general bath, the field of operation, including the axillæ, is shaved and washed with soap

and water and finally with an ethereal solution of bichloride of mercury, 1:2000. Patient etherized, ready for operation; the instruments are brought in a tray of hot water; towels are wrung dry from a hot solution of bichloride of mercury, 1:1000, and spread about the field of operation and wrapped about the arm. The first incision, elliptical, sweeps around the lower border of the breast below the nipple, through healthy skin and tissue only, down to the capsule of the breast; a second incision, also elliptical, sweeps above the breast; the flaps are rapidly turned back, and the breast, capsule and muscle (if necessary) removed; the vessels are caught by pressure-forceps as divided. When the breast is removed, the wound is filled with sponges wrung from the plain hot water in which they were washed and the flaps held together by an assistant. The axilla is now opened, if necessary, to remove the enlarged glands or for exploration, either by extending the incision or by a new one and the glands turned out, together with adipose tissue. Next, the vessels and bleeding points are ligated with catgut; the wound flushed with warm bichloride of mercury, 1:2000; rubber drainage introduced and held in position by safety-pin properly arranged in the dressing, and the wound closed by interrupted catgut sutures. Over the line of incision a thin gauze pad moistened and sprinkled with iodoform is placed. The dressing is completed by Gamgee pads, several layers of gauze and bandage.

The first dressing is usually allowed to remain until the third or fourth day, unless considerable oozing or a rise of temperature takes place. At the first dressing the rubber drainage is removed to give place to horsehair, in fat breasts, or it is wholly left out in thin breasts when no oozing continues. The second dressing is allowed to remain a week or more. In cases in which the skin is so much infiltrated that sufficient flaps cannot be made to close the wound, the dressing is made very much the same, only boric acid ointment is substituted for dry iodoform dressing.

CASE I.—Miss H. V. S., aged forty-nine, a native of the United States, and by occupation a domestic, was admitted to the hospital October 18, 1887. Her family history showed heredity with regard to new growths; otherwise good. Previous health good. About eighteen months ago she noticed a small nodule in her left breast, to which she gave little attention. Six months later it had grown to the size of an orange and became somewhat painful. She then went under the care of a female "cancer doctor," under whose treatment she remained until a few days before admission to the hospital. Patient presented no cachexia, was well nourished, appetite has recently failed, sleepless nights due to pain. Breast very large, freely movable, somewhat nodular, and at several points a deep purple blush appeared. The day following her admission the breast was

<sup>1</sup> For assistance in preparing the following report I am greatly indebted to Dr. W. G. McDonald, House-Physician, Albany Hospital.

amputated; a portion of the pectoral muscle was removed. Wound left to heal by granulation. Axilla free from lymphatic enlargement. Tumor, a cystic sarcoma, weighed five pounds. Patient was discharged from the hospital November 17, 1887; wound nearly closed and healthy in appearance.

CASE II. - Mrs. M. C., aged seventy, a widow, was admitted to the hospital November 11, 1887, suffering from scirrhus carcinoma of breast. Family history revealed that her mother had died from cancer at sixty. Patient was the mother of nine children, all of whom were nursed. Always had worked very hard. Two years ago she noticed a tumor, but kept it secret from the family and her physician. Lately it had grown very rapidly and showed a tendency to ulcerate. The growth now implicated the whole breast; nipple retracted, axillary glands involved. Breast amputated, axilla entered and glands removed. Wound left to heal by granulation. Patient discharged December 12, 1887, with a healthy looking ulcer.

CASE III. - Mrs. T. R., aged forty, married, native of United States, was admitted to hospital January 10, 1888, with the following history: Mother died of cancer; a tubercular tendency upon the paternal side. Five years ago a few drops of blood oozed from nipple, and a small nodule was discovered. It grew very slowly for two years, then somewhat more rapidly until November 25, 1886, when breast and axillary glands were removed at the Albany Hospital. The wound healed kindly and patient was discharged from hospital with a clean, soft cicatrix. About three months later a small nodule appeared in the border of the cicatrix and this in turn was followed by others, spreading out over site of breast and into the axilla. January 10, 1888, patient again entered hospital. After careful examination and consultation, in view of the extent of infiltrated tissue and great probability of immediate return, I advised against another operation. I have learned that she subsequently entered a hospital in Philadelphia and was operated upon (an operation lasting about four hours), and recovered from the operation, but with a return of the growth immediately after.

The foregoing cases of tumors of the breast, which I have thought of sufficient interest to report, illustrate: First, the danger of procrastination and, also, the willingness of patients to listen to all manner of treatment that may be suggested by officious friends.

As is so often the case, these patients would have been very much better had they submitted to an early operation; and one cannot but remember the words of wisdom so earnestly expressed by the late Professor Gross, in one of his last papers, pleading for early operation in all cases of malignant growths.

The last case illustrates a point that one cannot help observing in this class of cases; that when patients have once determined upon an operation, they will have it a second, third or more times, in the hope of recovering their health, though the

surgeon may not always encourage them in it. Would that they might be taught to make use of their courage early.

#### INTESTINAL OBSTRUCTION AND HERNIA.

Two cases of intestinal obstruction presented for treatment.

CASE IV. - Miss F. E. H., aged forty-six, single, native of the United States, and by occupation a dressmaker, gave a good family history. When fifteen years old had suffered from dysentery, followed by peritonitis, since which she has suffered much from abdominal pain and difficult defecation. For the last twelve years has been unable to secure movement of bowels except by use of large enemata. Upon physical examination a mass about the size of an orange could be made out in the left inguinal region. Uterus seemed free from growth. A diagnosis of probable solid tumor of broad ligament pressing on the descending colon made, and exploration decided upon. October 7th, a short median incision was made and the splenic flexure of colon found bound down to the left iliac fossa by old adhesive bands, a dilated portion of colon giving the appearance of tumor felt. The adhesive bands were divided and thoroughly loosened up and abdomen closed. Patient speedily recovered from operation very much improved.

CASE V. - Mr. S. V. V., aged twenty-two, single, native of the United States, and by occupation a knitter, was admitted to hospital December 1, 1887, having already suffered five days from symptoms of intestinal obstruction. His condition being very good, large enemata were given, both fluid and gaseous without success. During the following night stercoraceous vomiting again set in and an exploration was determined upon early in morning. When the abdomen was opened, a portion of the ileum was found occluded by a diverticulum having become attached to the crest of the sacrum. The diverticulum was removed, and the attached portion was invaginated upon the bowel and the opening closed by continuous catgut suture, and abdomen closed.

Patient never rallied well from operation. There were signs of great cardiac depression, and although stimulants were administered freely, he died sixty hours after operation. No vomiting occurred after operation, and bowels moved spontaneously twelve hours before death. An autopsy eight hours after death showed that the abdominal wound was healing nicely; that the peritoneal congestion had largely subsided and that the intestinal wound was closed by firm adhesion.

Three operations were done for the relief of hernia: one for strangulated femoral, one for irritable femoral and one for irritable inguinal, all successful.

CASE VI. *Strangulated femoral hernia.* - Miss N. C., aged twenty-five, single, native of United States, and by occupation a domestic, was brought to the hospital as an ambulance case, with the following history: Two days before, while lifting a tub of water, she felt a sudden giving way, with sharp abdominal pain, and noticed a small tumor in the

groin. A physician was called, who made a severe and prolonged effort at taxis. Immediately after admission the parts were scrubbed, shaved and washed with an ethereal solution of mercuric chloride; patient etherized; incision made; sac incised and a very dark and congested intestine exposed. The constriction was relieved, when the intestine improved in appearance and was returned. Sac was drawn down, invaginated, ligated with heavy catgut and removed. Wound drained by horsehair, closed with catgut, dressed with pads and bichloride gauze; over all a spica bandage of gauze. Temperature never above 99.5° F. First dressing changed on the fourth day and drainage removed; second dressing left on two weeks. Patient discharged December 24, 1887, cured, three weeks after admission.

CASE VII. *Reducible inguinal hernia.*—F. S., aged fourteen, native of United States, was admitted to hospital December 10, 1887, with a completely reducible inguinal hernia. He had been unable to have a truss fitted that would retain hernia or that could be worn with comfort. It was decided to try the Heaton method, and twenty minims of Heaton's fluid were deposited about the inguinal ring, after scrubbing, shaving and washing the overlying skin with ethereal solution of mercuric chloride. A firm pad and spica made the dressing; patient was put in bed with hips elevated, and not permitted to get up for two weeks. Considerable inflammatory reaction took place, and some induration of tissue remained when he left the hospital, December 24, 1887, cured.

CASE VIII. *Irritable femoral hernia.*—Miss M. A. D., aged twenty-six, native of United States, and by occupation a housewife, was admitted to the hospital with the following history: Last February, while lifting a heavy kettle from stove, was taken with sudden and severe pain in the lower abdomen. A physician failed to discover the hernia until six months later. The hernia, which was reducible at times, could never be retained by a truss with comfort. Late in August decided symptoms of strangulation occurred and the hernia was reduced with great difficulty. Early in October, after precautions used in other cases had been taken, sac was opened, and hernia returned, after small section of omentum had been removed by ligation with Staffordshire knot. The sac was pulled down, invaginated, ligated and removed. Dressing as in Case I. Patient recovered without material rise in temperature and was discharged cured October 29, 1887. This patient came to my office May 20, 1888, thoroughly well.

#### ABDOMINAL SECTION.

In the four months' service, ten abdominal sections were made, two of which were done before the class of the Albany Medical College and in the general operating amphitheatre of the hospital. Four exploratory incisions were made. In one case, extra-uterine pregnancy was suspected. The incision revealed fibroid and soft myxoma implicating the whole body of a then pregnant uterus. This operation was followed by recovery. Incisions were made in two cases of fibroid, having in view supravaginal hysterectomy or the removal of tubes and

ovaries. The growths were very adherent in both cases, but the appendages were removed. One died and one recovered. Another exploration revealed colloid carcinoma arising from ovary and infiltrating mesentery. A large mass was removed, the abdomen was washed out with sterilized water (105° F.). Patient died on the fifth day from exhaustion.

Three cases of ovarian cyst were operated upon successfully, although it was necessary to sew one sac into the incision on account of adhesions. The history of two cases of intestinal obstruction have been given elsewhere in this paper. A case of hemato-salpinx was operated upon, with entire relief from symptoms.

A case of renal cyst is of sufficient interest to warrant a somewhat fuller history:

CASE IX.—Miss B. D. B., aged twenty, native of Ireland, and by occupation a domestic, was admitted to the hospital in September, 1887. Family history good. Had always been well and strong. First menstruation at fifteen, painless and scanty, but regular. First noticed enlargement of abdomen five years ago. Tumor commenced in middle of abdomen and was very hard. Two years ago grew very large and was tapped five times at frequent intervals, and a large quantity of dark, frothy liquid was drawn each time. After last tapping sac did not refill until the spring of 1887, when it began to enlarge rapidly. When first ill, suffered from amenorrhœa for a year, since which she has been regular. Since tumor appeared, has passed but little urine; and during summer had a complete suppression. Many of the facts were learned from the patient after operation; she did not give an intelligent history. October 3, 1887, the operation was done. Usual median incision was made, a large cyst (supposed ovarian) was exposed, found adherent, but tapped. The process of enucleation was very tedious and a large number of ligatures were introduced. While working for a pedicle, the right kidney was reached and the cyst's origin made out. The pelvis of the kidney, together with the vessels, was included by a single ligature, the Staffordshire knot. Patient reacted well from operation. Temperature never rose above 101° F. She rapidly convalesced and returned to her home and occupation. Have heard recently (May, 1888) that she is in good health. The average excretion of urine, for three weeks after the operation, was twenty-four ounces per day; urea approximately three hundred grains.

The fluid drawn from the cyst was dark, specific gravity 1010, contained albumin, paralbumin, abundant chlorides, no apparent amount of bile pigment, no cholesterin, and urea approximately two per cent. Microscopically nothing was determined.

While from the history of the case obtained from the patient before operation and the examination, I was led into a diagnostic error, manifestly the median abdominal incision was the only one by which the



cyst could be successfully removed. I am convinced that all growths of the kidney, cystic or otherwise, that have reached any considerable size, should be approached by the median incision. On the other hand, renal calculus, abscess, occlusion of the ureter, or any cause which may call for the exploration or removal of a not overly enlarged kidney will require the lumbar incision.

#### TUMORS OF THE BLADDER.

CASE X. *Papilloma with phosphatic incrustations, in a female.*—Mrs. C. K., aged forty-five, married, a native of the United States, and by occupation a housewife, was admitted to the hospital October 18, 1887. She gave a history of vesical irritability, passing sand and ammoniacal urine, containing mucus, pus and blood for the past two years. Recently has had several vesical hemorrhages. Patient etherized, urethra dilated and bladder explored by the finger. A villous growth was found upon the left side of the bladder, together with general phosphatic incrustation. The curette was used with considerable vigor and detritus removed by Bigelow's evacuator. (After-treatment will be spoken of later.) Patient discharged, improved, November 1, 1887.

CASE XI. *Papilloma of bladder; perineal cystotomy (median); recovery.*—Mr. L. H., aged forty-seven, married, a native of the United States, by occupation a carpenter, gave the following history: An uncle died of cancer; family history otherwise good. When fourteen years old he received an injury to the testicle, after which it took on a neuralgic condition, and it (the left) was removed two years ago by myself. About the time of the removal of the testicle, the patient had a hemorrhage from the bladder. He was very comfortable for a year after the operation, when cystitis set in; the bladder became very irritable; hemorrhages took place at frequent intervals. He suffered from severe pain in the perineum. The prostate was enlarged and tender. Urine wholly by catheter. A careful search revealed no calculus. January 3, 1888, the patient was etherized, placed in lithotomy position, median incision made with free division of prostate. By hypogastric pressure the thickened and contracted bladder could be brought against the exploring finger. A papillomatous growth could be felt spread over a considerable area of the bladder. It was removed by means of forceps and curette. Bladder was washed with warm borated solution and drainage introduced. Patient discharged January 31, 1888, in good condition. Have received letters since, stating that he is in good health.

CASE XII. *Papilloma of bladder; perineal cystotomy; death from surgical kidney.*—Mr. F. D., aged twenty-seven, married, a native of Canada and by occupation a plumber, gives a good family history. Had gonorrhœa ten years ago; had been somewhat intemperate in his habits. Five years ago had slight hemorrhage from the bladder. Suffered more or less, at times, until a year ago, when, after great exposure, the symptoms became greatly aggravated. He entered the hospital January 4, 1888, and was treated by washing out the bladder with borated solution and

the administration of various remedies, all without material improvement. February 2, 1888, the patient was etherized and the same operation done as in Case II. Patient did very well until the fifteenth day, when urinary excretion became very small, vomiting became troublesome, and the patient sank and died February 19, 1888. An autopsy showed far advanced pyonephritis. Casts had been found in the urine before operation.

The after-treatment of all the cases was very similar. Drainage was introduced in all; in Case X. a self-retaining catheter. In the other cases a large catheter was introduced through the perineal wound and retained by a rubber band attached to the catheter, the bands being attached in turn to an abdominal belt very much after the manner of a uterine supporter, the catheter cut off an inch or two from the body. This device has proved very satisfactory in our hands. Through the drainage tube the bladder was washed every day with a warm solution of benzoate of sodium (a teaspoonful to a pint). This, together with tonic doses of quinine, iron and a bland diet, constituted the whole treatment.

How long shall drainage be allowed to remain? is a vexed question here as elsewhere. In general terms, it should be allowed to remain until the urine has returned to a normal condition and vesical irritation is largely reduced or has disappeared. After two weeks a clamp may be placed over the end of the drainage tube and the patient be allowed to sit in an easy chair. There is likely to be no incontinence. The clamp may be removed from time to time and the retained urine evacuated. In this way the tolerance of the bladder may be determined.

In all these cases drainage was essential to cure. I have yet to learn of an operator who is satisfied with suprapubic drainage. The perineal route to the bladder was selected because of the superior facilities for drainage, the benefit to be gained by section of the prostate, the simplicity of the operation and the ease of after-treatment.

Case XI. was especially benefited by section of the prostate. Mr. Reginald Harrison (Lettsomian Lectures for 1888) dwells at length on the sphincter and supporting function of the prostate. In contracted bladder, long subjected to spasm and irritated by the presence of foreign bodies and chronic discharges, it seems that the division of this muscular band must be followed by the same relief that is experienced in fissure of the anus after rupture of the sphincter ani.

When the time comes for the removal of the drainage tube we shall have accomplished another purpose in many cases, the removal of the obstruction caused by the hypertrophied prostate.

The advantage of suprapubic cystotomy, by affording a view of the field of operation, is apparent rather than real. In this relation may be

mentioned three cases of vesical calculus, two of which were operated upon by litholapaxy, with one death from surgical kidney. The other case was so unpromising that no operation was advised.

#### SURGERY OF THE JOINTS.

**CASE XIII. Floating cartilage.**—Mr. J. R., aged nineteen, native of United States and by occupation a printer, was operated upon at the hospital January 21, 1888, and a floating cartilage the size of a quarter silver piece removed. Local anæsthesia by cocaine. The history is as follows: The fourth of July, 1887, his knee caught in a semi-flexed position while running, and he was unable to extend the leg again until he worked it a little in various directions. This accident recurred quite frequently, and finally the patient discovered a movable body within the joint cavity, which led him to seek treatment. The cartilage was caught in a pocket and retained by compress and bandage for a few days, when a clean cut was made and cartilage removed. Limb dressed on straight posterior splint, antiseptic dressing, no drainage. Patient did well, save an intercurrent attack of tonsillitis, which caused a considerable rise of temperature, leading to a removal of dressings, only to find limb in good condition.

**CASE XIV. Excision of the outer condyle of the humerus.**—Master W. C. B., aged nine, fell from a cherry tree four months prior to his entrance into the hospital, fracturing the external condyle of the humerus and dislocating the forearm backward. The treatment instituted at the time of fracture had resulted in an ankylosed joint and useless arm.

An attempt was made to break up ankylosis under ether, but it failed. An incision was made along the outer side of the joint. The external condyle removed, dislocation reduced and arm dressed on angular splint. There was a small amount of suppuration about external wound. After two weeks, passive motion was begun. The boy has gained a fairly useful arm, with free motion at elbow. Pronation and supination, as well as extension and flexion, being quite readily performed.

**CASE XV. Subspinous dislocation of the humerus.** (*Old.*)—Mr. R. D., aged forty-eight, by occupation a cowboy, and a resident of New Mexico, was referred by Dr. McLean, and admitted to the hospital November 30, 1888. His case is somewhat rare. I believe there are but a few more than thirty cases in the whole literature upon this subject. The accident occurred several months prior to his admission. The mechanism of the dislocation was as follows: He was herding cattle with a "bucking" mustang and was thrown over the mustang's head, striking first on his extended hand and then on the point of his shoulder. He was seen by a local physician, who claimed to have reduced the dislocation. After the dressing was removed his arm was powerless. Was unable to touch opposite shoulder by four inches. After consultation an ineffectual attempt at reduction was made both by extension and counter-extension and by fixation of shoulder and manipulation. An operation for the restoration of the head of the humerus to the glenoid cavity was advised, but declined by the patient.

Amputation of the thigh was done four times, with three recoveries and one death. Three cases were of tubercular arthritis of the knee-joint. One was of thirty years' standing; had been arrested, but five years ago, while on a debauch, he fell and injured the knee-joint again, since which it has undergone continued suppuration; patient has had night-sweats and he was very feeble. Resection was impossible, owing to extensive complication of the condyles and haft of femur and of the head of the tibia.

**CASE XVI.**—A man, aged twenty, who gave a history of trouble with the knee dating from an injury seven years ago. The condition of the patient and of the limb was similar to that of Case XIII. Amputation was done. Both of these cases recovered. Wound healed by first intention. Sweating ceased. Both gained flesh and strength before leaving the hospital.

**CASE XVII.**—Miss B. H., aged sixteen, native of United States, was of the tubercular diathesis. Five years ago first began to have trouble with knee. Two years ago sinuses formed, but closed partially. Has worn an extension apparatus since. This case seemed a favorable one for excision, and all the preparations were made for the operation. The condition was carefully explained to patient and friends, and excision most earnestly recommended. Patient insisted, not without the advice of surgeons, upon a clean amputation, which was done. Patient recovered nicely, and returned to her home three weeks later. An examination of the joint showed it favorable for resection.

**CASE XVIII.**—A most unfortunate railroad accident. Crushing of knee and extensive laceration of soft part, with great loss of blood. Was operated upon, although patient's condition was very unfavorable. After operation patient's limbs were bandaged firmly with flannel rollers and free stimulation ordered. Later, transfusion was done, twenty ounces of saline solution being thrown into his circulation. He never recovered from the shock, and died ten hours after the operation.

#### MISCELLANEOUS CASES.

**CASE XIX.**—*Lacerated wound of hand, with fracture of metacarpal bones.*—J. H. P., aged nineteen, native of United States, and by occupation a carpenter, came to the hospital with a severe wound of the hand caused by the revolving knife of a plane. The three outer metacarpal bones of the left hand were comminuted, the extensor tendons divided and the palmar arch was wounded. Patient was etherized, vessels caught and tied with catgut. Wound was now thoroughly cleansed of foreign bodies and spiculæ of bone, 1:3000 solution of mercuric chloride being used for the purpose. Divided tendons were now brought together and sutured by fine silk. Drainage tube was introduced and external wound closed by catgut. Hand and forearm placed upon an anterior splint, and all dressed with iodoform and sublimated gauze. Patient had but slight febrile reaction. Wounds healed without suppuration, bones united, and after five weeks fingers could

be quite readily extended, motion being very satisfactory in all save the little finger.

CASE XX. *Vesico-vaginal fistula, with occlusion of urethra.*—Mrs. C. Y., aged twenty-eight, a widow, came to us for relief November 20, 1887, with the following history: May 7, 1887, was taken in labor with second child. Labor continued for forty-eight hours after rupture of membranes, and was terminated by forceps' delivery. After delivery, patient had severe pelvic cellulitis, terminating in abscess, followed later by peritonitis. It was soon discovered that urine flowed away through vagina. She received no treatment before coming to the hospital. Upon examination the urethra was found absolutely closed by adhesive inflammation. Great difficulty was experienced in finding the fistula, it being in a fold of the vagina high up. Anterior lip of cervix sloughed.

First operation enlarged fistula, which would only admit the point of a probe, and the opening of the urethra to admit sound by use of knife. The tract of the urethra was kept open by a self-retaining catheter and the passage of sounds. She left the hospital two weeks after operation to return for second operation. Jan. 13, 1888, she was successfully operated upon for closure of fistula. Silver wire was used for sutures. Patient now passes urine voluntarily by urethra. Advised to introduce a bougie twice a week.

CASE XXI. *Vesico-vaginal fistula.*—Mrs. M. C., aged thirty-one, married, native of the United States. Has been troubled with dribbling of urine from the vagina for seven months. She dates her trouble from birth of first child. The labor was very difficult and was finally terminated by forceps' delivery. Child weighed thirteen pounds. The edges of the fistula were freshened and wound closed with six silver wire sutures. Patient did well. Sutures removed on tenth day. Union perfect.

During my four months' service, six cases of advanced carcinoma of the cervix presented for treatment. They were all peculiarly sad ones. The patients had either not called their physicians' attention to the trouble, or it had been temporized with until all hope for relief, by radical operation, was in vain. In all cases the broad ligaments, the base of the bladder, the vagina and the rectum were either wholly or partially infiltrated by the disease. In none of the cases could amputation of the cervix, by, preferably, vaginal hysterectomy have been done with any hope of relief. The early diagnosis of this disease cannot be too earnestly insisted upon.

CASE XXII. *Perforating ulcer of foot.*—Miss I. M., aged fourteen, was operated upon at the hospital, October 29, 1887. She gave the history of having had cerebro-spinal meningitis four years ago, after which there was some contraction of the plantar fascia and Achilles tendon. Nine months ago an ulcer developed on the ball of the foot near the little toe. The ulcer was very indolent, never secreting true pus and communicated with the metatarsophalangeal joint of the small toe. The little toe and outer metatarsal bone were removed. Wound healed

very slowly, but finally united well. She was discharged September 12, 1887, cured.

CASE XXIII. *Lacerated cervix with hypertrophic elongation.*—Mrs. L. S., aged thirty-seven, married, native of the United States, family history good. Previous health good. Menstruation normal; first at twelve years. Mother of three children, oldest nine, youngest born August 15, 1887, and died soon after delivery. Five years ago, shortly after delivery of second child, patient began to suffer from pelvic pain, difficult locomotion and leucorrhœa which was untreated. During last pregnancy patient suffered a great deal, and noticed a body (the cervix) protruding from vulva. At term a great deal of trouble was experienced and instruments finally resorted to. Since delivery all old symptoms have been exaggerated. Upon exposure a body congested upon side was seen protruding from vulva. Upon introducing sound length found seven inches.

*Operation.*—Wire écraseur drawn moderately tight at vaginal juncture and whole body drawn down. Cervix amputated by scissors, and borders closed by silver wire. No untoward symptoms appeared after operation. Sutures removed on the ninth day. Patient returned to the hospital a month later, feeling well, uterus smaller, no discharge, no discomfort.

CASE XXIV.—This case presents one of the most remarkable histories and the greatest degree of courage that I have ever seen exhibited in any one person.

Mr. G. H. C., married and has several children; occupation, farmer; residence, Grant, N. Y.; admitted to Albany Hospital, October, 1886, and, again, on February 15, 1887. Family history free from any diathesis.

*Previous history of patient.*—When eighteen years old, while jumping in the snow, he struck a piece of wood bruising the perineum, but producing no wound. Twenty years later he was thrown from a wagon, striking upon his head. This accident confined him to bed for three weeks. Eight years later patient began to suffer from constant pain in the back. Pain was described as constant, tearing, burning; also had a feeling of weight over bladder and in perineum. The first urine voided was frequently of a creamy consistence; later, normal. Examination of urine showed a trace of albumin, abundance of pus, but no casts. No frequent desire to urinate, no marked symptoms of cystitis or stone. Was carefully sounded several times by myself.

The first operation was done October, 1886, by making an exploration in the perineum to the left of the median line and extending back toward the neck of the bladder, midway between the rectum and tuberosity of the ischium, at a point where the patient felt certain the parts were swollen at times, and from which the pus came. I made as deep a dissection as seemed safe and proper, but failed to discover any pocket of pus. From this operation the patient made a good recovery, and later on returned to his home, feeling somewhat encouraged, but insisting upon another operation later on, and, if necessary, to open the left kidney, over which he, at times, complained of much pain.

When admitted to hospital the second time, he



was carefully examined, symptoms and condition being about the same, but was sent home, for a time, to improve in general health, before an operation.

He was readmitted to the hospital April 19, 1887, and on the 20th, in view of symptoms, together with tenderness and apparent increase of area of dulness over left kidney, an exploration was made. The kidney was cut down upon and found normal in appearance. The finest needle of the aspirator was introduced into the substance of the kidney in various directions and nothing found. Wound was flushed with mercuric chloride (1 : 2000), vessels ligated with catgut, drainage introduced, and closed with interrupted sutures of catgut. Wound healed by first intention. No serious symptoms from operation were observed. Patient left the hospital May 9, 1887, improved somewhat in mind, at least. Probable source of the pus was from an abscess about the base of the bladder.

Was again admitted to hospital October 8, 1887. His condition was the same as when last discharged, May 9, 1887. After hypodermatic injection of cocaine, patient was put in lithotomy position and median incision made upon the staff. No abscess could be found upon base of bladder within, which was carefully examined by my finger introduced.

Drainage was employed and hot dressings applied. After operation patient had three chills and a considerable rise of temperature, but made a good recovery. Left hospital November 5, 1887. Perineal wound nearly healed. Urine passed through urethra after third day.

Insists upon having one more operation, as he states he must get relief. My impression is that the abscess is situated in the vesiculæ seminales, and that an operation through the dilated rectum may reach it. November 26th he came to the hospital looking well, but there is still much pus in his urine. Passed urine six or seven times in twenty-four hours.

**CASE XXV. Epithelioma of penis.**—Mr. C. M. E., aged sixty, married, native of United States, occupation farmer. Father had epithelioma. Grandfather died from some form of cancer. Eczema has been prevalent in family.

In April, 1887, was poisoned by sumach. Had previously suffered from eczema a great deal. Called a physician May 1st, when whole penis had an eczematous appearance, acquired phimosis and considerable ichorous discharge. Prepuce was slit up at that time, showing a very large ulcer. Had always been correct in his habits. Ulcer continued to increase, despite of all treatment, and became very painful. Glans at present time is twice normal size. Has the appearance of cauliflower. Patient has become broken down in health and has lost flesh. No glandular enlargement. Penis was removed near base by knife. Patient convalesced rapidly. There has so far been no return of disease.

In this case a simple elastic ligature was thrown about base of penis and controlled hemorrhage admirably.

In all, 133 operations were done. There were 7 deaths: 2 due to peritonitis, 2 to uræmia, 2 due to the exhaustion of the disease, and 1 to shock.

The death-rate is, therefore, five and two-tenths per cent., not very bad, considering the class of cases that come to a general hospital for treatment.

**Dressings.**—Elsewhere in this paper, allusions have been frequently made to the use of antiseptics in dressings and washing of wounds. Our methods have been very simple and the antiseptic agents used neither new nor novel.

To begin with, all the gauze used is of home manufacture—that is, plain gauze medicated chiefly with bichloride of mercury. Plain absorbent gauze can be bought in two hundred yard lots at four and a half cents per yard. This is conveniently cut and folded in five yard pieces and treated as follows: First, by immersion in solution of hydrargyri bichloridum, 1 part; acid. tartaric., 15 parts; glycerin, 150 parts; aquæ ad. q. s. 1000 parts.—M. and add eosin q. s. to give a faint tint. After remaining in this solution for twelve hours, the gauze is wrung dry and packed in stoneware jars ready for use.

The addition of tartaric acid and glycerin is very advantageous, increasing both the antiseptic and absorbent power of the gauze. The bichloride gauze is used for making Gamgee pads for bandages and for iodoform gauze, by rubbing iodoform in its meshes. Iodoform and boric acid have been used in dressing ulcers, both in powder and in ointment. Boric acid solutions have been used in washing the bladder and urethra before and after operations. A one-half per cent. solution of hydrogen peroxide was very satisfactorily used about the mouth and nose. It also acts as a powerful deodorant.

For flushing wounds, 1 : 2000 or 1 : 3000 bichloride of mercury solutions were used. In my abdominal work, hot water took the place of all antiseptics, save in the dressing. The carbolic spray has been used in the room for three hours before opening the abdomen. No poisonous effects were observed during the four months from the use of any antiseptics, save in one case, in which a slight iodoform erythema appeared upon the abdomen after an abdominal section.

## MEDICAL PROGRESS.

**Iodides in Aortic Aneurism.**—After a study of twenty-four cases, M. GERMAIN SÉE concludes that iodides are the best treatment for aortic aneurism. They have a definite action in lessening the dyspnoea, by directly acting on the catarrhal products and liquefying them. They reduce ultra-pulmonary congestion, diminish the venous stasis, and contract the walls of the tumor. They decrease the pain, and exert a beneficial influence on the aphonia and paralysis of the vocal cords, which often obtains.

He finds that patients afflicted with this disease nearly always become phthisical subjects.—*Gazette Hebdomadaire de Méd. et Chirurg.*, August 17, 1888.

**Congenital Narrowing of the Arterial System.**—DR. FRAENKEL, on the 25th ult. before the Medical Union of Berlin, made an address on congenital narrowing of the aortic system. He remarked that hitherto it was an affection but little known clinically; what little there was known about it was pathological and principally due to the labors of Morgagni, Meckel, Virchow and others. There are great difficulties in the way of diagnosis. One of the cases was that of a powerfully built man of thirty-four, who had œdema of the lower extremities, with a pulse rate of 100 to 112, difficulty of breathing, some bronchial râles, but otherwise no affection of the lungs. Circulatory changes were the marked feature of the case. There was pronounced narrowing of the arteries, with great tension. The heart was displaced to the left and downward; the apical impulse external to the nipple line, very broad, high and resistant, as in insufficiency of the aortic valves. The cardiac sounds were everywhere pure, but the second aortic sound was strikingly accentuated. The quantity of urine was slightly diminished and it contained no albumen. The patient was of healthy family and had always been well till his fifteenth year, since when he had complained of heart trouble and occasional shortness of breath, which clearly could not have been produced by his occupation of gardener. In his twenty-first year he was a soldier, but had to be discharged, as he could not perform the marches, owing to his cardiac trouble. He returned to his occupation and became gradually worse till he entered the hospital with dropsy. With rest, digitalis and opium he improved rapidly and was discharged.

**Diagnosis.**—Congenital narrowing of the aortic system. Whilst at work the symptoms soon returned, and the patient again entered the hospital, where he died in a short time with great dyspnoea. The autopsy showed very marked narrowing of the aortic system, commencing at the attachment of the aorta and implicating the whole system.

A second case was that of a laborer, who entered the hospital in 1886 on account of general malaise, but without any particular complaint. All the organs were healthy, except for striking symptoms in the circulatory system. The patient, who was of extraordinary robustness, showed abnormal narrowness of the arteries, with marked dilatation of the left ventricle. The apex beat was very resistant, external to the nipple line, with accentuation of the second sound. There was absence of history of straining efforts. Although temporary improvement took place under treatment, the lungs became tuberculous and the patient died of pneumothorax. The autopsy showed striking narrowness of the whole aorta.

Such cases are most frequently met with in women and in girls, and are diagnosed chlorosis. In men, on the other hand, who make more demands on the heart, the disease generally leads to dilatation of the left and then of the right ventricle. Cases in which such calls are not made on the heart carry the affection to their lives' ends. Rest naturally brought about temporary improvement, until the possibility of it was at an end from the advancing disease. The autopsy did not always confirm the diagnosis. He mentioned three cases, one a coachman, a second a young soldier, and a third a naval officer, in which improvement had taken place, and a restful mode of life had rendered the improvement permanent.

**Résumé.**—There are individuals with congenital narrowness of the arterial system in whom disturbances develop, usually very slowly, when they are subjected to exertions which are greater than the heart is equal to under the circumstances.—*Medical Press*, July 18, 1888.

**Silico-fluoride of Sodium as an Antiseptic.**—DR. CONRAD BERENS, in the *Therapeutic Gazette* of July 16th, after referring to culture experiments demonstrating the usefulness of the silico-fluoride of sodium as a germicide, anti-ferment and deodorant, and its property of coagulating albumen, adduces clinical evidence confirmatory of these results. The drug was used locally in solutions of from one to six parts to one thousand of water, and administered internally in doses of one grain, and proved efficacious during and subsequent to operations for cataract, in catarrhal and purulent ophthalmic conditions, in similar conditions of the nose and throat, in suppurative otitis, in uterine disorders, in gonorrhœa, in gleet, in balanitis, in gangrene, in acid fermentation of the stomach and in tinea circinata.

The silico-fluoride of sodium is soluble in water at 60° F., in proportions not exceeding half a grain to a drachm, the resulting solution being of a slightly acid taste, perfectly limpid and odorless. The writer concludes as follows: That sodium silico-fluoride is practically harmless; that it is more efficient in preventing decomposition than either bichloride of mercury or carbolic acid, in such doses as are not harmful or dangerous; that it is extremely efficient in inflammatory conditions of the mucous membranes; and that, in conditions associated with the production of pus and the results of fermentative processes, silico-fluoride of sodium acts with prompt and harmless efficiency. The more extended clinical use of the drug, I believe, will go to add further support to the evidence of its promptness and efficiency. These are reasons sufficient to call the attention of the profession to this drug.

**For Chronic Acne.**—

R.—Resorcin,  
Pulv. amyli,  
Zinci oxidi . . . . . 3j.  
Ung. petrolei . . . . . 3iij.—M.

This is to be carefully applied at night, and removed in the morning by means of wadding saturated in olive oil. It causes no irritation and is very effective.—*Lyon Médicale*, August 5, 1888.

**The Dietetic Treatment of Diabetes Mellitus.**—CLESS (*Deutsche medicin. Wochenschr.*, 1887, Nos. 44-47) reports 56 cases of diabetes mellitus at the medical clinic at Tübingen, subjected with the best results to a purely dietetic treatment. In 4, on account of the poor general condition, a stringent diet could not be enforced; 3 were at the clinic but for a brief period; of the remaining 49, after the withdrawal of carbohydrates, sugar disappeared from the urine in 20, 2 were completely cured, and 5 almost so, in that they could take considerable amounts of carbohydrates without sugar occurring in the urine; 13 had no sugar in the urine, at least on abstinence from carbohydrates; and in the remaining 29 the amount of sugar, and in most in very decided measure, was diminished. The diet, with slight modifications, was the usual one. It is to be noted that

not every trace of carbohydrates was excluded, but the amount taken in 24 hours did not exceed 150 to 300 grains. The diet was almost exceptionally well borne; most gained in weight, and the general condition improved, sometimes notwithstanding other complications. The tentative administration of iodoform, salicylic acid and opium produced no noticeable effect.—*Centralb. für klin. Medizin*, June 30, 1888.

**Sulphonal**—the Influence of the Various Hypnotics upon Salivary, Gastric and Pancreatic Digestion.—CRAMER, of Freiburg before the *Verslg. d. Südwest-deutsch. Neurologen u. Psychiatern*, stated that he had used sulphonal in four hundred and seven instances. In three hundred and seventy-seven sleep of several hours was produced; in thirty the result was incomplete, the sleep lasting only a few hours. The drug was given in tablets or with the food or drink, its tastelessness rendering the administration easy. The dose was never more than forty-five grains. Given to melancholiacs in broken doses in the course of the day the drug relieved the anxiety and restlessness, and aided the otherwise restless patients to six or eight hours of unbroken sleep. The sedative influence of the drug was marked in several instances of periodical mania.

Cramer also reported the results of comparative investigations into the influence of the various hypnotics upon the dextrin and sugar forming quality of the saliva and upon the digestive capacities of the gastric and pancreatic juices. The conversion by the saliva of the carbohydrates into sugar remains unchanged with the administration of chloral, paraldehyde, amylene hydrate and sulphonal; gastric digestion, however, is slowed by chloral, paraldehyde and amylene hydrate, while it is entirely uninfluenced by sulphonal. The function of the pancreatic juice is also almost wholly suspended by the first three, while it is undisturbed by sulphonal.

In the discussion which followed, KAST, of Freiburg, stated that the dose of sulphonal must vary for each individual case. It must especially be borne in mind that females rapidly respond to small doses. The slight solubility of the drug is increased by careful trituration and administration in a warm vehicle. Sulphonal is best given after meals.

In reply to an inquiry, Cramer stated that a tolerance to the drug did not arise and that it was not necessary to increase the dose, though the drug be taken for a long time.—*Wiener medizin. Pr.*, July 1, 1888.

**Acetphenetidin**.—F. MÜLLER, before the *Verein für Innere Medizin*, Berlin, recently stated that acetphenetidin is, chemically and actively, closely related to antifebrin. Eight to twelve grains reduce fever temperature to normal; fifteen grains are rarely necessary. The decline takes place in three or four hours and is accompanied with sweating. The apyrexia lasts three to five hours, when the temperature rises again. Chilliness is rarely noticed, rigors not at all. Tolerance is readily established, rendering increasing doses necessary. The author, in two cases, observed cyanosis, depending upon methemoglobinemia and disappearing spontaneously.

The drug exerted no influence upon the course of the disease during the progress of which it was given. It acts just as well as antipyrin, antifebrin, quinine, etc., but without secondary manifestations, such as roaring in

the ears, vomiting, etc. Cyanosis may be avoided by not giving more than seventy-five grains in twenty-four hours. In the case of antifebrin, methemoglobinemia occurs more readily, because anilin is readily separated, acting as a poison to the blood.

Acetphenetidin is an anti-neuralgic in the cardiopathic headaches, in hemicrania and in neuralgias, as well as in the pains of tabes, headache, in contracted kidney, in chorea. Large doses are, however, here necessary; thirty to sixty grains must be given to obtain results. The remedy has proven itself an excellent anti-rheumatic, particularly for the early, severe symptoms, fever, pain and swelling, after which, salicylic acid readily overcomes the remaining manifestations. It ought to be useful in chronic articular rheumatism and in gonorrhoeal arthritis. Like the other measures, it fails to prevent endocarditis and pericarditis. In a word, the remedy is comparable in its action to the other remedies of the group, but is preferable on account of less danger in its administration. Katz recommended the drug for whooping-cough.—*München. medicin. Wochenschr.*, July 10, 1888.

**Combined Chloroform and Cocaine Anæsthesia**.—PROFESSOR OBALINSKI, of Cracow, remarking the antagonism between chloroform and cocaine, determined to take advantage of it in anæsthesia for operative purposes, and has now employed the combined chloroform and cocaine method in twenty-four cases with, as he states, the most satisfactory results. He first administers chloroform by means of an Esmarch's mask until the stage of tolerance is reached, which is generally in from four to twelve minutes, with the use of from one to three drachms of chloroform. He then injects into the region about to be operated on a solution of cocaine of the strength of from three to five per cent., the total quantity of cocaine injected being from three to five-sevenths of a grain. Even more of this might, he thinks, be safely used, both because chloroform is the best antidote to cocaine and because part of the cocaine is about to be removed from the body by the operation. After the injection no more chloroform is as a rule given, unless in protracted operations, when very small quantities are administered at considerable intervals. For this method several advantages are claimed, amongst others the following: A smaller quantity of chloroform is sufficient; vomiting is very rare; the depression on awaking is much slighter than when chloroform only is used. The only disagreeable symptoms which Professor Obalinski has observed have been excitement and throwing about of the arms in some nervous people, but as this occurs when chloroform alone is used, it is not at all certain that it ought to be ascribed to the cocaine. He recommends the combined method for extensive operations, finding the local use of cocaine usually quite sufficient to render minor operations painless.—*Lancet*, August 4, 1888.

**Saccharin**.—M. CONSTANTIN PAUL is loud in praise of saccharin, and thinks failures from its use are due to the fact that it is more especially a medicament than a food. He finds that after five months' use no serious gastric disturbance resulted. It is an efficient antiseptic, and in a 1:500 solution wholly corrects the formation of staphylococcus pyogenes aureus. He recommends its use in lavage of the stomach, and finds it especially good when



that organ is the seat of cancerous growth. He is conducting experiments and hopes to prove its value in destroying the microbes of typhoid, erysipelas and puerperal fever.—*L'Abeille Médicale*, July 16, 1888.

**Treatment of Rachitis.**—DR. A. JACOBI, in *Archives of Pediatrics*, says, "Rachitis due to, or connected with, digestive disorders demands the correction of the latter. Gastric catarrh is not frequently primary; more commonly the consequence of faulty diet; but it is in both cases the cause of anemia, and of either insufficient or abnormal secretion of both the mucous membranes and the glands. The gastric catarrh of rachitis is preëminently acid, thus neutralization of the stomach is required before every meal and between meals. Prepared chalk, calcined magnesia, bicarbonate of sodium, the several preparations of bismuth, find their proper indications in this condition. The salicylate of bismuth, animal carbon, resorcin, find their places, besides aromatic teas, in complications with fermentative processes in the intestine and excessive flatulency. When the secretions of the stomach are merely insufficient, the addition of chloride of sodium in proper quantities will facilitate the formation of hydrochloric acid. When this does not suffice, pepsin and muriatic acid, the latter largely diluted, will take the place of the physiological gastric juice; and bitter tonics, and alcoholic stimulants, also, diluted, will stimulate a normal secretion. Still the selection of a proper food forms the main part of the indications.

When, twenty years ago, C. Wegner fractured the bones of rabbits and fed the animals on minute doses of phosphorus, he found that these bones would heal in a much shorter time than those which were not so supplied. This operation induced him to employ the drug in all cases of subacute and chronic osteitis, Pott's disease, caries of the tarsus; and a great many cases led him to conclude that recovery is more readily accomplished under this treatment. Phosphorus is, by virtue of its irritating effect, when given in small doses, a tissue-builder, when in large doses, a tissue-destroyer. Thus it is that he is convinced of its tissue-building properties in other parts also. He has availed himself of this quality of phosphorus for other purposes also. It has served him well in those ominous cases, of purpura and similar processes, in which a congenital or acquired ill nutrition of the bloodvessel walls results in habitual hemorrhages.

The dose of phosphorus in these cases is from one-two-hundredths to one-one-hundred-and-fiftieth of a grain three times daily. He generally prescribes the oleum phosphoratum of the Pharmacopœia, which contains one part of phosphorus in ten parts of ether and ninety of oil. Half a minim contains one-two-hundredths of a grain. The oil solutions must not be kept in a concentrated form lest they be decomposed. A mucilaginous emulsion is the best mode of administration, for which he sometimes substituted Thompson's solution. On no account must we be tempted to try in their place the phosphates, the uselessness of which—in such cases—he has discussed extensively in a previous paper. The hypophosphites of the Pharmacopœia, with or without iron, are a better preparation than the former."

**Amylene Hydrate and Chloral.**—MAYER (*Therap. Monatsch.*, July, 1888) has observed that amylene hydrate

is not only an hypnotic, but also a sedative, especially in diseases of the chest, promptly allaying cough. The irritation in the throat ceases before sleep is produced. He recommends its administration in doses of forty-five grains, in two tablespoonfuls of red wine with sugar; on account of its insolubility, to be recently mixed. He gives chloral similarly:

R—Chloral hydrat.	. . . . .	3j.
Succi liquiritiæ	. . . . .	3j.
Aquæ dest.	. . . . .	3x.—M.
S. A tablespoonful (chloral, gr. xxiv).		

**Poisoning by Camphor.**—A fatal case is reported, in the *Australian Medical Journal*, June 15, 1888, the victim being a girl of eighteen who had been in the habit of eating camphor. She was unconscious when seen by the physician and efforts to arouse her were fruitless. She died in convulsions. The post-mortem gave entirely negative results.

**Deodorized Iodoform.**—To overcome the persistent penetrating odor of iodoform, CANTRELLI adds one part of menthol and one part of oil of lavender to twenty parts of iodoform. For cleansing the hands a small quantity of an alcoholic solution of oil of lavender is added to the water.—*Corresp. Bl. für Schweiz. Aerzte*, July 15, 1888.

**Salol in Catarrh of the Bladder.**—ARNOLD, of Stuttgart, in the *Therap. Monatsch.*, for July, relates the case of a patient, eighty years of age, with hypospadias, in which, on account of retention of urine, from paralysis of the detrusor urinæ, catheterization twice daily became necessary from the 2d of January. The urine continued clear and of acid reaction until the 20th. At this time, there was some difficulty in passing the catheter. Notwithstanding its most careful disinfection, acute cystitis manifested itself on the 21st. The urine became of ammoniacal odor, of alkaline reaction, turbid and precipitated a sediment of bloody mucus. Fever set in, with tenderness over the bladder and with strangury. On the 24th, the temperature was normal and the pain in the region of the bladder had disappeared. In spite of rest abed, milk diet, cataplasms and warm baths, the urine maintained its abnormal condition until February 8th. Fifteen grains of salol were now given twice daily. As the drug was well borne by the stomach, the dose was increased to forty-five grains daily. To determine the action of the medicament, the urine was collected in appropriate receptacles. With the use of thirty grains a day, the urine slowly cleared up; the evening's urine was slightly alkaline and still ammoniacal; the morning's urine was slightly acid. Taking forty-five grains daily, the urine partook of a dark greenish color, but rapidly became clear; the discolored sediment, previously present, steadily diminished. On February 16th, the urine, to the last drop from the catheter, was entirely clear and acid in reaction; more urine was passed spontaneously than had been so passed in many years. On the 18th, the salol was tentatively withdrawn; the day following, the urine was again cloudy and deposited a sediment. Forty-five grains a day were then given until the 28th; the turbidity disappeared after the first dose. A second tentative withdrawal of the salol on the 29th of February was followed by a result similar to that which followed the withdrawal on the 19th: turbidity and

deposit of sediment, though in less degree. Forty-five grains were daily administered until mid-March, when the patient got out of bed; from that time on, thirty grains were given until April 3d, when the dose was reduced to fifteen grains. In a few days, the urine, which had hitherto remained clear, again became turbid and deposited a sediment. At the same time the frequency of micturition was increased. Thirty grains of salol were again ordered, followed by the disappearance of turbidity and sediment. Up to the 24th of April, five ounces had been administered. The general condition of the patient was excellent and the urine of normal condition.

The efficacy of the drug is assured in this case by its tentative withdrawal. Forty-five grains a day sufficed to check the ammoniacal fermentation in the bladder and to maintain the urine clear and of acid reaction. It must be added that the salol was well borne; the tongue became clear and the appetite improved.

**For Enlarged Breasts.**—After stating that the internal administration of preparations of iodine decidedly reduces the women, KISCH (*Deutsch. med. Zeitung*, No. 32, 1888) recommends the following for enlarged breasts with excess of adipose tissue:

R.—Iodoform. pur. (fab. Tonk. deodor.) 1 part.  
Vaselin. pur. . . . . 15 parts.  
Ol. menth. pip. . . . . q. s.—M.  
Ft. ung.

S.—To be rubbed into the breasts, which are then to be covered by linen moistened with warm acidulated clay:

R.—Alum. crud. . . . . 1 part.  
Plumbi acetat. . . . . 5 parts.  
Aquæ dest. . . . . 100 parts.—M.

And covered with rubber paper. The dressing remains twelve hours, is changed morning and evening and is continued for several weeks. So that the breasts, after the removal of the fat, may not become too much relaxed or wrinkled, the author has them rubbed with one of the aromatic spiritus and has the breasts supported by appropriate elevating bands.—*Medicin. Chirurg. Rundschau*, August 1, 1888.

**Guaiacol.**—It is suggested by SAHLI that this be used in place of creasote, because its composition is constant and unchangeable, while that of creasote is frequently uncertain.—*Les Nouveaux Remèdes*, Aug. 8, 1888.

**A Phenacetin Exanthem.**—In a case of anemia, with sleeplessness and headache, in which the bromides and antipyrin failed, VALENTIN, of Berne, administered nine grains of phenacetin at night. On two successive evenings, there was extreme heat of face, preventing sleep. The remedy was withdrawn, but renewed in a week, in doses of fifteen grains. The heat of face again occurred. During the night, it was noticed that the body was covered with red spots. At eight o'clock the next morning, the temperature was 101.5°; in the afternoon, 100¼°. The spots were profuse on arms and legs, scantier on the trunk; the majority were not larger than lentils, in part acuminated; they were darker at the centre than at the periphery; some were flat; all partly disappeared upon pressure. Headache was still present, as was the

heat of face, though less marked than during the night. Urine was dark, but free from blood-coloring matter. The eruption disappeared on the following day, though anorexia and languor remained.

It may be presumed that phenacetin, like the salicylic acid compounds, like quinine and the other antipyretics, gives rise, in those specially susceptible, to a purpura-like affection, when taken in doses easily borne by others.—*Therap. Monatsh.*, July, 1888.

**Serpent Bites and Hoang-nan.**—BARTHÉLEMY records two cases of bites from poisonous serpents treated successfully by this drug. In both the symptoms were extremely alarming and the depression marked. He attributes the results to the direct excitant effect of the drug on the cerebro-spinal centre.—*Gazette Médicale*, Aug. 9, 1888.

**Acetic Acid as an Antiseptic in Obstetrical Practice.**—

ENGELMANN (*Centralbl. für Gynäk.*, No. 27) recommends acetic acid as a disinfectant in obstetrical practice. By numerous experiments, continued over a long period, he has shown that its antiseptic virtues compare with those of carbolic acid. It has the advantage of being entirely non-toxic, so that it can be used in a more concentrated form. It has, besides, certain hemostatic properties. It possesses, in addition, the peculiarity of saturating the tissues, which other antiseptics do not, corrosive sublimate, for instance, forming an insoluble albuminate. With the mercuric chloride it shares the property of attacking metals, though not in so marked a degree that the instruments suffer. The forceps may be placed for a quarter of an hour in a three per cent. solution of acetic acid, without harm. It is unfortunate that soap is not soluble in the acid, making two ablutions necessary. The skin, however, is made soft and pliant. The author usually uses three per cent. solutions, at times five per cent., though the latter cause burning sensations at wounded surfaces, so that they are only used when septic infection already exists.—*Wiener medicin. Presse*, No. 30, 1888.

**Antipyrin Subcutaneously.**—VON BRINCKEN (*Therap. Monatsh.*, July) recommends the injection of a 2 per cent. solution of cocaine to prevent the pain of the subcutaneous administration of antipyrin. He has used the procedure in two cases of sciatica and in one of lumbago, always with the same result. The patients, females, however, complained of unpleasant effects from one-eighth of a grain of cocaine, faintness and nausea. The amount was reduced to one-sixteenth of a grain. This sufficed to render a sufficient area anæsthetic. The injection of antipyrin is made after three to five minutes.

**Ether Hypodermatically for Asphyxia.**—M. TESTEVIN reports brilliant results from the use of ether subcutaneously. He was called to see a woman, apparently moribund from charcoal fumes. Artificial respiration, flagellation, heat and cold had been used some time previous to his arrival with no success. Respiration had nearly ceased and the heart action was extremely feeble; having no electrical apparatus, he injected ether. The patient made a good recovery, although for six months after there was noticeable a weakening of the memory.—*L'Abeille Médicale*, August 6, 1888.

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SATURDAY, SEPTEMBER 1, 1888.

## CREOLIN.

SUBSTANCES used as antiseptic or germicidal remedies are not only open to more exact estimation of their powers, but their effects are more evident and less dependent on subjective interpretations than any other remedial agents. For these reasons fluctuations of opinion concerning them are slow, and newly discovered members of the class do not so quickly take a prominent part in practice as do, for example, antipyretics.

These ideas arise in connection with the new antiseptic creolin, which had been in use as a disinfectant for some time before Esmarch, about one year ago, made an experimental study of it, but it had never before attracted any attention as a possible addition to the list of antiseptics. Up to that time carbolic acid, bichloride of mercury and iodoform had become firmly settled as routine antiseptics, though all had their drawbacks, and the introduction of a new one must have been difficult. Soon after the publication of Esmarch's investigations (*Centralb. f. Bact.*, etc., Bd. II., Nos. 10 and 11) followed by those of Fröhner (*Arch. f. wiss. u. prakt. Thierhekd.*, 1887), a number of independent observers took up the practical study of the drug, so that we are now in a position to come to some conclusion with regard to it.

Creolin is a product of the dry distillation of certain kinds of English coal. It occurs as a dark brown, syrupy fluid, having a strong tarry odor. It mixes in all proportions with water, oil and glycerin,

and is soluble in alcohol. The watery mixtures have at first a milk-white color, but on standing a finely flocculent precipitate separates and the mixture assumes a brown color. Creolin is a "secret" preparation, and is, moreover, a mixture and not a definite chemical compound, and Liebreich has very properly called attention to the fact that under the circumstances the makers can alter its composition as they see fit. However, Fischer's investigations (*Phar. Zeitung*, 1887, 103) go to prove that at present creolin has a pretty constant composition. He found in it, in addition to a number of other coal-tar bases, eighteen per cent. of naphthalin. He could find no trace of carbolic acid, though it has been alleged that carbolate of sodium is one of the principal ingredients.

Esmarch has found that in antiseptic power creolin is equal to carbolic acid, and that soap made with it is more powerful than the common 1:1000 corrosive sublimate soap. The absence of toxic properties in creolin was shown by Fröhner, who fed it to dogs, in quantities of nearly two ounces, without producing symptoms of intoxication. Eisenberg (*Wiener med. Woch.*, 1888, Nos. 17, 18, 19) instituted a series of experiments, comparing creolin with carbolic acid and corrosive sublimate, and came to conclusions identical with those of Esmarch and Fröhner. Creolin gauze proved to remain aseptic for months, giving it a great advantage over iodoform.

These theoretical investigations brought out a number of communications, giving the results of clinical experiment and generally extolling the new remedy in high terms. The greatest amount of testimony is in regard to septic and purulent conditions and the treatment of accidental and operative wounds. In such cases Kortüm (*Berlin. klin. Woch.*, 1887, No. 46) sums up the advantages of creolin in these cases as uniting the beneficial properties of iodoform and bichloride, without their intoxicating power. As this observer states it, "Creolin is not poisonous, is disinfecting, limits secretion, encourages granulation and is to a certain degree hæmostatic." This opinion is concurred in by Neudörfer (*MED. NEWS*, 1888, vol. i. p. 210), who reports great success in erysipelas by applying solutions of creolin to the inflamed areas. Kortüm also used creolin in gynecological practice, and in the form of tampons saturated with a two per cent. solution had favorable results in cases of severe atony of the uterus.



A great number of observations have been published, showing the safe and prompt action of creolin in cases of inflammation of the genito-urinary tract, from mild urethritis to purulent cystitis. In these cases, however, the opacity of the solution is a great drawback to its continued use. For this reason its application will have to be limited to the early days of treatment, as suggested by Hiller (*Deutsche med. Woch.*, No. 27, 1888). The latter used creolin extensively in the treatment of empyema, and found it superior to all other antiseptics for that purpose. In consequence of the disadvantage named, he used creolin only in the first few days after operation, and, when the disinfectant action had been secured, returned to thymol and boric acid solutions. He afterward applied the treatment to disease of the bladder, on the recommendation of Jessner (*Deut. med. Zeitg.*, 1887, No. 102), and found it more efficient than all others, though at the same time no more irritating than 1:500 thymol solutions.

In various inflammatory and suppurative diseases of the conjunctiva, Amon (*Munch. med. Woch.*, No. 26, 1888) and Purtscher (*Clb. f. prakt. Augenhkde*, März, 1888) report the successful use of creolin solutions of a dilution of one to four in a thousand.

The internal administration of creolin has already been quite extensive. Amon, who has used it for some months, internally and by inhalation, in pulmonary tuberculosis and simple inflammatory affections of the lung with more or less secretion, gives it a high place among remedies for these common diseases. Beginning with a one-half per cent. solution and increasing to two per cent., creolin is easily inhaled. Expectoration is favored and secretion decreases rapidly under its application. In two cases of incipient phthisis the local signs disappeared on giving creolin. Amon believes that creolin is destined to take an important rank in the prophylaxis and therapy of infectious diseases.

Equally favorable are the results of creolin in diseases of the alimentary canal. Amon tried it in some mild cases of diphtheria with success. Hiller would lead us to believe that it is almost a specific for all intestinal affections. Among the conditions to which he has applied it are meteorism, typhlitis, intestinal catarrh, atony with constipation and especially typhoid fever. In all diseases of the stomach and intestine, accompanied by excessive putrefaction, creolin, according to this observer, is the best remedy, excelling naphthalin, creasote, thymol, calo-

mel and all others. He gives creolin in doses of five to fifteen grains, usually three times a day and one hour after meals.

On account of the tarry odor of creolin it must be given in thick gelatine capsules, without any addition. A slight sense of warmth in the stomach and mild taste of creolin in the mouth were the only effects perceived by patients even when taking as much as four drachms within four days. The urine is not affected by the internal administration of creolin. On the strength of his experience Hiller advises the use of creolin in dysentery, cholera morbus or even cholera asiatica. On account of the necessity for giving the drug in capsules, it cannot be used in the treatment of infants.

Making allowance for the enthusiasm common to all early investigations with new drugs, it would seem that in creolin we have a remedy of positive value. It is difficult to reconcile our knowledge of antiseptic agents with the universal testimony as to the non-intoxicating nature of creolin, and if it is true, as Hiller suggests, that this is simply due to the physical condition in which it is exhibited (*i. e.*, in emulsion, the drops of which are absorbed with difficulty), it would be interesting to know how this is brought about, and what new product, or combination of known products of coal-tar gives rise to such a beneficent remedy.

#### LIKE AN ALARM OF FIRE.

THE head of the Health Department of New York City has some very clear notions in regard to the great need for alertness in the management of infectious diseases. He has had occasion lately to write officially as to the imminence of yellow fever. From his letter we quote a paragraph which shows its author's confidence that his department is thoroughly equipped and disciplined. After remarking that yellow fever is not to be dreaded this year at our northern cities, he says, "If the fever should occur, however, it would be in isolated cases, with which we are prepared to deal so promptly and effectually that it will have no chance to spread. The machinery of the contagious diseases division of this department is in such condition that it can be set in motion at a moment's notice, and I am confident that the response of this department to a notice of known or suspected disease of a dangerous character would be like that of the fire department to an alarm. With special reference to yellow fever, we have a medical inspector constantly on duty at our headquarters. Within

five minutes after receiving a report he would be on his way to inspect it, within thirty minutes we should have his report, and immediately an ambulance and the disinfecter's wagon would be despatched to the place. In an hour we should have the patient on his way to the hospital at North Brother Island."

When we reflect how much panic and harm often arise from a lack of preparation for such visitations, it is very gratifying and reassuring to read that a health official compares the readiness and discipline of his department with those of the model fire departments of our large cities, where everything is in motion at the touch of a bell.

PROFESSOR VON ESMARCH, of the University of Kiel, accompanied by his wife, the Princess Henrietta, of Schleswig-Holstein, and their son, Dr. Ervin von Esmarch, arrived in this country last week to attend the Congress of American Physicians and Surgeons at Washington. Last Tuesday evening the Germans in New York entertained the distinguished party at Terrace Garden. In the reception room the Schleswig-Holstein arms were conspicuously displayed with the German and American colors. There was an address of welcome to which Professor von Esmarch replied, and the Princess was presented with a bouquet. The Princess, who is an aunt of the present Emperor of Germany, upon withdrawing, handed to the Committee 1200 marks to be distributed among the Schleswig-Holstein poor of New York.

THE Seventh International Congress of Ophthalmology was held at Heidelberg on August 8th to 11th. Among the Americans present were Drs. Knapp, of New York, Hasket Derby, of Boston, Harlan and Randall, of Philadelphia, and Kipp, of Newark. Professor Donders was elected President. There were also elected a number of foreign Honorary Presidents, including Drs. Hasket Derby and Knapp, on behalf of America.

A PROFESSORSHIP of ophthalmology has been established at Copenhagen—the first in Denmark—and Dr. Edmund Hansen Grut has been elected to the chair. Grut has raised the department of ophthalmology in Denmark to an independent study, it having formerly been but a branch of surgery. All the recent Danish ophthalmologists have been students of Grut's, he having established the first eye clinic in 1863. Grut was born in 1831 and began his professional career in 1854. He has

taught ophthalmology in the high school of Copenhagen since 1863.

VAN ERMENGEN has been made Professor of Hygiene and Bacteriology at the University of Ghent.

DR. F. BRAMANN, First Assistant of the Royal Surgical Clinic at the University of Berlin, in recognition of his thesis upon "Myotomy and Tenotomy, Now and in Pre-antiseptic Times," has been made a privat docent in the medical faculty of the University.

DR. THOMAS TAUNTON SABINE died at New York City, August 23d, aged forty-seven years. He was a prominent surgeon, and was connected with Bellevue, St. Mary's and other hospitals, but he is best known as the Professor of Anatomy at the College of Physicians and Surgeons, to which chair he was promoted in 1879, following Dr. Sands in that position, when the latter became Professor of Surgery.

DR. LEWIS DRAKE died at Rahway, New Jersey, on August 17th, at the ripe age of eighty-six years. For nearly sixty years he had been a leader in medicine and in public affairs. He graduated from the University of Pennsylvania in 1829.

## SOCIETY PROCEEDINGS.

### CONGRESS ON TUBERCULOSIS OF MAN AND ANIMALS.

*Held in Paris, July 25 to 31, 1888.*

JULY 30TH—MORNING SESSION.

(Specially reported for THE MEDICAL NEWS.)

(Continued from page 220)

*Third Question: Modes of Introduction and Propagation of the Tubercular Virus in the Economy. Prophylactic Measures.*

#### INOCULATION OF TUBERCULOSIS BY THE FINGER.

M. TSCHERNING, of Copenhagen, having, some years ago, observed the inoculation of tuberculosis by the finger, performed amputation of the finger and excision of the axillary glands; histological examination showed that these glands were involved. The patient was cured. He knew of another case, a veterinarian, who was accidentally inoculated during an autopsy; his finger became involved, the parts were excised and tubercle bacilli were found, but no other lesions of the different organs.

M. TORKOMIAN, of Scutari, was accidentally wounded during the autopsy of a tubercular patient; he developed a paronychia with axillary adenitis; but he has noticed no more accidents since, which proves that man can resist the penetration and generalization of the tubercle bacillus under certain conditions.

M. VERNEUIL mentioned the fact of his making the

post-mortem of a tuberculous patient with M. Maison-neuve. They were both wounded on the same day and neither of them developed the disease. Dissecting-room keepers are often affected with local tuberculosis without any fear of generalization; still, he has observed two cases of such affection producing in one a tuberculous cystitis, in the other a pleuritic and pulmonary tuberculosis.

M. CHAUCHEAU also mentioned his observations. He had an anatomical tubercle for three months, and the fear of the fate of Laënnec, who died from such a lesion, made him experiment on calves, and see what effect a superficial wound, like the one of vaccination, would have. Out of five operations on calves, three had nothing, the other two presented local accidents. No general accidents were found when the post-mortem was made, a short time after. The inoculation by a superficial wound is possible, but it is not an easy method of penetration of the tubercle bacillus.

M. VILLEMEN remarked that Koch observed that the bacillus only developed in an immovable tissue; hence the movements and rubbing of the integuments are not favorable to the development of the microbe.

#### RESEARCHES ON THE GENERALIZATION OF EXPERIMENTAL TUBERCULOSIS.

M. JEANNEL, of Toulouse, endeavored to ascertain how long tuberculosis would remain local. He found that if an extremity is amputated twenty-four hours after an inoculation, the animal will certainly die of tubercular disease. An adenitis consecutive to tuberculosis by subcutaneous inoculation is virulent from the fifth to the seventh day. The virus passes the first chain of glands before the fourth day. The blood of a rabbit inoculated by subcutaneous grafting behaves like a virulent dilution on or before the second day. We can safely say that tuberculosis is generalized over the whole organism before its existence is manifested by visceral localization.

M. ARLOING also admitted the penetration of the bacilli into the blood and their rapid dissemination; but for tuberculosis to manifest itself in multiple places, it must find places suited to its development; and for this the penetration of microbes alone is not sufficient, the field must be prepared by the secretion of a solid matter.

#### ON THE RESISTANCE OF HENS TO TUBERCULOSIS BY INGESTION.

MM. STRAUSS and WURTZ, of Paris, from their experiments, showed that the gallinaceæ can be submitted to the prolonged ingestion of enormous quantities of tubercular matter without presenting any tubercular lesions; but from this we must not conclude that the introduction of tuberculosis by the intestinal canal of hens is impossible. The localization of tubercular lesions in gallinaceæ, to the digestive tract and its surroundings renders this contagion probable, but certain unknown conditions are necessary. The conclusion is that gallinaceæ are extremely refractory to tuberculosis by ingestion.

#### ON THE ACTION OF GASTRIC JUICE ON THE TUBERCLE BACILLUS.

MM. STRAUSS and WURTZ also referred to the experiments of MM. Chauveau, Gerlach, Klebs, Toussaint, etc., who have shown that tuberculosis can be commu-

nicated by the ingestion of tubercular matter; hence one might conclude that the gastric juice was unable to destroy the virulence of tuberculosis. M. Wisener, who made experiments on that ground, did not take the necessary precautions. He used artificial gastric juice (pepsin and hydrochloric acid) in which he placed for digestion fragments of tubercular organs, which were then inserted in the peritoneum of rabbits.

They had operated on pure cultures of tubercle bacilli, with the natural gastric juice obtained from a young dog which had had a gastric fistula for a long time. This gastric juice was very active and digested perfectly well cooked white of egg. The cultures used were made on glycerized gelatine of six weeks or two months old; the bacilli were rich in spores. They proceeded as follows: in little flasks containing one cubic centimetre of fresh gastric juice, they placed a piece of platinum wire from the tubercular culture, then these flasks were placed in a heat chamber kept at a temperature of 110° F. for variable periods, some one hour, others two, three, four, five, six, twenty-four, and forty-eight hours; after that time, about seven or eight drops of the contents of the flasks were inoculated with the hypodermic syringe in the peritoneum or subcutaneous cellular tissue of rabbits or guinea-pigs. These animals were killed at the end of thirty to forty days. At the autopsy, they found that all the animals which had received cultures, which had remained in the gastric juice for one, two, three, four, five, and six hours became tuberculous. Those that had been inoculated in the peritoneum presented a general tuberculosis of the peritoneum, liver, spleen, lungs. Those that had been inoculated subcutaneously presented a caseous abscess, rich in tubercle bacilli, while all the animals that were inoculated with tubercular cultures; which had been in contact with the gastric juice for twenty-four or forty-eight hours, remained perfectly healthy.

These experiments show that the sporulated bacilli of tuberculosis resist the action of the gastric juice of the dog for at least six hours, at the body temperature, without losing in any way their virulence. This virulence is absolutely destroyed in twenty-four hours by this same gastric juice.

In those experiments in which the pure gastric juice acts directly on a pure culture, the action of this juice must be stronger than if it acted on tubercular matters introduced into the stomach; in such cases the bacilli are imbedded in the tissues (meat, viscera) and in part protected by them. In addition, the gastric juice is diluted by the food and liquids taken, and the food rarely remains six hours in the stomach: hence we must not think that the gastric juice in man will at all protect him against tuberculosis.

#### FIRST CHILDHOOD AS AN ORGANIC MEDIUM IN ITS RELATION TO TUBERCULOSIS.

M. LANDOUZY, of Paris, said that tuberculosis shows or presents a variety of forms, according to the ground on which it develops at the different ages of man. One of the most interesting of these stages to consider is certainly the one starting at birth until the age of two years. In the baby, as had been already shown, tuberculosis has a greater tendency in its clinical and anatomicopathological manifestations, to be a general disease rather than a local one; this we have had the opportu-



nity to witness, on many post-mortems, where the lesions could not explain the death, which we had to attribute to the fever.

In broncho-pneumonia of babies terminating fatally Koch's bacillus is always found; but at the autopsy we find that the disease has not gone beyond the pregranular stage. In most of these babies, measles has been the starting cause of the disease, which had been latent up to then, and he thinks that most of these measles the broncho-pneumonia ought to be ascribed to the action of tuberculosis instead of measles.

He thinks that babies are more amenable to treatment than at a later period; and especially by feeding we are able to neutralize this tendency to tuberculosis; but only boiled milk must be used. Not only does tuberculosis penetrate by the digestive tract, but also through the skin and the lungs; heredity is also a large factor; a child will be born tuberculized as another is born syphilitized.

Tuberculosis in children is extremely common; in his wards he has found in fifty autopsies, one death out of three due to tuberculosis; MM. Hayem and Damaschino have obtained the same result. His conclusion is that hygiene must insist on the promulgation of laws that will regulate the feeding and hygiene of the child, and the physician himself must not give up a child because he suspects hereditary tuberculosis.

#### EXPERIMENTAL DIAGNOSIS OF TUBERCULOSIS.

M. VERNEUIL said that this experimental diagnosis is probably more important and more certain than searching for the tubercle bacillus with scrofulo-tuberculosis products; two or three guinea-pigs are all that is necessary, and a few sterilized Pasteur's tubes. The inoculation is made, and ten to twelve days later, when the animal even does not appear diseased, he is killed, and if the matters inoculated were tuberculous, we shall find on the peritoneum a confluent eruption of tubercles, with an extension of the disease to the spleen and liver.

M. CLADO said that tuberculosis is only visible to the microscope on the tenth day, and is well seen macroscopically on the fifteenth; the spleen, it is to be observed, presents tubercles in its interior, not on its surface. This method will also enable us to know when a tubercular abscess treated by injections of ether iodoformized ceases to contain virulent pus.

M. NOCARD said that the method recommended by MM. Verneuil and Clado can be used in veterinary medicine; but the bacteriological examination must also always be made. When we want to know the origin of substances that were in contact with the air, it is to be preferred that inoculation should be made under the skin; for outside microbes injected in the peritoneum might produce death before the experiment is completed; under the skin they produce an abscess which will discharge, but the local tuberculosis will remain; we can even detect the bacillus in the discharges coming from the suppuration of the abscess.

#### TUBERCULOSIS OF THE THYMUS GLAND.

Dr. A. JACOBI, of New York, read a paper on this subject; he considers this lesion to be of more frequent occurrence than is usually thought; taking the form of caseous inflammation of granular tuberculosis or again arterial tubercular lesions; when compared to the vis-

ceral tuberculosis of children, one must remember that tuberculosis of the thymus is not rare. The tubercle bacillus is found in the majority of cases.

#### EVENING SESSION.

##### MANNER OF CONTAGION OF TUBERCULOSIS BY THE DIGESTIVE TRACT.

M. BUTEL, of Meaux, claimed that tuberculosis is more often transmitted by the digestive tract than by the respiratory, and it has been proven to-day that other infectious diseases, such as typhus and malignant carbuncle, are more often produced by stomach ingestion than by any other. Vaccination of these diseases is, in fact, more certain than intravascular inoculation.

As regards tuberculosis, Jeannel has seen that the tubercular virus can penetrate the digestive tract without leaving any trace of its entrance point and yet produce pulmonary specific lesions. The tubercular virus chooses for itself a favorable part in which to develop without it being necessary that the virus should have been introduced there directly.

M. TRASBOT has observed the contamination of healthy guinea-pigs by tubercular ones which were living with them, through the digestive tract, the spleen and liver being particularly involved.

##### HOSPITAL HYGIENE OF TUBERCULAR PATIENTS.

M. GIORGIERI, of Florence, said that any city which does not contain special hospitals for tubercular or consumptive patients, ought to place them in well-ventilated separate buildings. The wards for these patients ought to be regularly disinfected, as well as the linen, clothing, spittoons, etc. As nurses to these patients, we ought to allow only strong, vigorous persons over thirty, who run very little danger from contagion.

##### TUBERCULOSIS OF THE BONES OF THE FACE.

M. LE DENTU, of Paris, observed in a man of thirty-two a primitive tuberculosis of the superior maxillary; it was first thought to be syphilitic, but specific treatment had no influence whatever. He had on the left side several suppurating fistulæ from the maxillary, and also an uneven palatine ulceration, also a suppurating of the ear and scrofulous cicatrices on the neck; he was treated with good results by the glycerole of iodoform 1 to 5.

##### PATERNAL TUBERCULAR HEREDITY.

M. LANDOUZY, of Paris, out of four children who died from tuberculosis, searched to ascertain whether this could be due to respiratory contamination; but the children had been separated from the father, who alone was tuberculous, the mother being well, hence this mode of contagion could not be considered. He admits the direct contagion by spermatozoa, for he has seen a woman who remained perfectly healthy give birth to a tubercular child and then have several abortions. The only explanation for these facts is the infection of the ovule by the spermatozoa.

##### ALIMENTARY ORIGIN OF INFANTILE TUBERCULOSIS.

M. LEGROUX, of Paris, said that cow's milk is certainly one of the most frequent ways of introduction of bacilli into the alimentary tract of children. When they have penetrated they either remain localized or generalize; the lymphatic organs agglomerate them and from

these are distributed all over the organism. They may remain latent or appear on the first occasion. On studying the point of entrance of tuberculosis in children, he has often concluded that the digestive tract was the only way, cow's milk having been given raw, without boiling; hence, let us not forget the danger of drinking raw milk. He thinks that tuberculosis can be produced by raw milk, even if the cow has a healthy appearance; and that the milk of the goat, mare, or ass is less dangerous than cow's milk.

M. THOMASSEN, of the Hague, said that, in Holland, veterinarians visit regularly the cows that furnish milk. If a cow is diseased, the farmer is requested to get rid of it, and the milk which is found good is sent to the city in sealed bottles.

M. LEGROUX asked that a commission of hygiene be formed in France, to examine milch cows, and forbid the sale of dangerous milk.

M. LANDOUZY asked whether veterinarians are certain of making an early diagnosis; if not, it would be more certain to recommend boiling the milk.

M. TRASBOT recommended boiling the milk as the only certainty, for tuberculosis cannot be always recognized. He mentioned the fact that an ox which obtained the first prize at an exhibition was found tuberculous.

M. NOCARD recommended goat's milk, if raw milk is desired, for this animal is very rarely tubercular.

M. LEGROUX proposed the establishment in Paris, of goat and ass stables, where such milk could be had.

M. TRASBOT remarked that goat and ass's milk is very expensive, and cow's milk would be used anyhow. Hence, boiling must be insisted upon.

#### SEVERAL OPERATIVE INTERFERENCES ON TUBERCULOUS PATIENTS.

M. RICHELLOT, of Paris, presented the history of a man of eighteen, who, in 1884, had a salivary fistula from Steno's duct, resulting from an abscess. He was cured eventually. In 1885, he had an enormous ganglionic swelling of the neck on the right side; all the glands were dissected out and the parts scraped, at the same time suppuration of the middle ear appeared. In December, 1885, the neck was cured, but a white swelling of the elbow made its appearance and increased rapidly. In April, 1886, the elbow was excised without complication, two suppurating cavities remained. In September, these were incised and scraped. In November, resection of a large piece of the ulna was done. In September, 1887, fistulous tracts were opened and scraped, cicatrization having taken place in November. The patient is doing very well, he has increased in weight and all lung manifestations have disappeared (in April, 1886, he had blood-streaked sputa, and physical signs at the apex of both lungs). To-day the patient appears perfectly cured.

This observation is remarkable as regards the length of the evolution of the disease, an attempt at lung involvement, without a real generalization of the disease, and the final successful result of operative interference. In rare cases such intervention will accelerate the course of the disease, auto-inoculation being produced.

#### ON THE CURE OF ANATOMICAL TUBERCLE BY THE THERMO-CAUTERY.

M. BARTHELMEY, of Paris, since 1882, has treated an-

atomical tubercle by the application of the point of the thermo-cautery, with numerous punctures penetrating to the depth of two millimetres, and extending one millimetre beyond the diseased spot. He has obtained very good results. He thinks, like Prof. Cornil, that this disease is due to the introduction of more than one microbe under the skin; it is usually a local cutaneous tuberculosis, but not always so. The cases he has followed have never presented visceral complications; they differ from lupus, which has given rise, on several occasions, to general tuberculosis. They also differ from primitive subcutaneous tubercular abscesses, which are always followed by a general tuberculosis, when operated upon.

Not only does this lesion present itself in the dissecting room, but he has seen it in a sister of charity who had dressed a cold abscess of the axilla; this tubercular process was three years old; he destroyed it in five sittings, one every five days. On one of his students, three sittings destroyed an anatomical tubercle of four years' standing. In twelve days he cured a tubercle of seven years' standing, and in five weeks one of nine years. As a dressing, a boracic ointment is all that is required.

#### ON THE CAUSE OF PAIN IN THE AMPUTATED STUMPS OF TUBERCULAR PATIENTS.

M. GUINARD, of Paris, said that we often hear persons complain of pain in the extremity which has been amputated. Their pains become less frequent if we take the precaution to excise the extremities of the nerves as high up as possible. He had observed two cases in which the pain of the stump was due to tubercular lesions, situated far from the citatrix and compressing the nerves of the region. In the first case, he found a deep abscess of the iliac fossa which pressed on the nerve of the sacral plexus, and produced pain which was located in the region of the foot. The abscess was cured in fifteen days, by two injections of etherized iodoform, the pain disappearing as the abscess receded. In a second case the pain was due to a ganglionic mass in the iliac fossa, which had not suppurated, and was treated locally with good results as regards the disappearance of the pain.

Whenever a tubercular patient presents himself with pain in his stump, he looks for tubercular lesions along the course of the affected nerve; if these lesions are removed the local pain will disappear.

#### SURGICAL THERAPEUSIS APPLIED TO TUBERCULAR LESIONS.

M. BARETTE, of Paris, recommended, a week before operating, to make an injection of etherized iodoform, which will prevent the formation of pus, and keep the wall of the abscess clean for the time of operating.

## CORRESPONDENCE.

### OBSCURE CASE OF ABSCESS OF THE LIVER.

To the Editor of THE MEDICAL NEWS,

SIR: The "Case of Abscess of the Liver," without the usual symptoms, which is reported by Dr. Dawson, of Charleston, S. C., in THE NEWS of August 11th, prompts me to mention briefly a somewhat similar case—similar, because of the absence of local signs.

Some twenty years since C. A., sent for me to attend him for malarial fever, as he had but recently returned from Tennessee, where he had resided for some months. I found the patient with a soft, rapid pulse, moist skin, temperature  $101^{\circ}$  and a report of "frequent chills." A diagnosis of malarial fever was made, a "blue" pill of five grains was given, followed by a Seidlitz powder, after which quinine was ordered, to anticipate the expected chill. It came, with a series of others, without any regularity, nor were they in any manner amenable to the quinine.

Rejecting my first diagnosis, suspecting septicæmia or pyæmia, as did Dr. Dawson, I instituted a searching and vigorous inquiry as to any local injury. I could find nothing, nor could I elicit any history of injury, although I repeatedly inquired. He presented no symptoms of local value, save occasional loose, clay-colored stools, the fetor of which was quite noticeable.

The case went on for some two weeks without much alteration, the patient growing weaker, more somnolent, with muttering delirium; the temperature fluctuating from  $100^{\circ}$  A.M. to  $102^{\circ}$  P.M., until death.

From the lack of salient points of any local trouble, excepting, of course, the "stools," for there was no enlargement of the liver, or jaundice, and taking into consideration the chills, I ventured to make a diagnosis of "abscess," location not known.

Assisted by a brother physician, to whom I made known my opinion of the cause of death, I made an autopsy, which revealed more than twenty distinct deposits of pus in the liver. The spleen was healthy but enlarged; the lungs were not examined. Kidneys normal, as was to be expected, since there was nothing evidenced by an examination of the urine during his sickness to implicate these organs.

Subsequently, I learned from his partner that while carrying one end of a counter he was struck in the "stomach" by one corner, and was obliged to sit down and rest for a moment. This was two or three days before his taking to the house. Had I known this during his illness much worry and speculation might have been avoided.

RALPH C. HUSE, M.D.

GEORGETOWN, MASS., August 13, 1888.

#### THE DINNER TO THE FOREIGN GUESTS OF THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

To the Editor of THE MEDICAL NEWS,

SIR: Some complaints having reached the Committee in regard to the distribution of invitations to the dinner to be given to the foreign guests of the Congress of Physicians and Surgeons, to be held in this city next month, I must beg the use of your columns to say that this distribution was in my hands.

The Council of the Congress having expressed themselves as averse to any elaborate entertainment on the part of the Congress, it may be said in the first place that this dinner is *unofficial* and is in the hands of the *members* of the Committee and not of the Committee.

As it was necessary, after the matter was decided upon, to act quickly in order that proper invitations might be sent to Europe and answered in time, it was not possible to arrange this distribution so methodically as might have been done had the time been longer.

It was intended that every member of the Congress—that is, every member of any of the constituent associations, should have an opportunity to subscribe.

Some circulars were sent directly by me and some of them by such representatives of the associations as I could most readily get at. It is possible that there may have been accidental omissions, and it is more than possible that at this season, when so many gentlemen are absent from home, some invitations have gone astray; another possibility, which we know to have been in some cases an absolute fact, is that circulars have been placed in the waste-paper basket.

This note is intended as an invitation to every member of all the associations composing the Congress of American Physicians and Surgeons, who wishes to do so, to send his subscription of twenty dollars to Dr. S. C. Busey, 1545 I St. (N. W.), Washington, D. C., for a dinner to be given at Willard's Hotel, in this city, on Monday, September 17th, at 7.30 P. M.

I am very respectfully,

ROBERT T. EDES.

WASHINGTON, August 22, 1888.

#### NEW INVENTIONS.

##### A NEW INTRA-UTERINE ELECTRODE FOR USE IN THE APOSTOLI OPERATION.

BY G. BETTON MASSEY, M.D.,  
OF PHILADELPHIA.

AFTER many experiments with different forms of electrodes for the application of powerful currents to the interior of the uterus, I have finally settled on the form shown in the cut, which I think is an improvement on those employed by Apostoli and other operators.

The Apostoli instrument consists of a sound, sliding within an insulating cover of hard rubber or celluloid (the latter material being preferred by him) and capable of being fixed solidly in the handle with any desired exposure of the end. The disadvantages of this method of insulation are:

(1) The impossibility of covering part of the curved portions of the sound by the unyielding cover when we wish to protect the neck of the uterus from cauterization. It is possible that the cases of atresia that Apostoli admits have occasionally followed his negative cauterizations were due to unnecessary action in this situation, as it is an accident that has never occurred to me since I have been in the habit of protecting the cervix. This protection of the cervix and concentration of the current action upon the interior of the corpus alone is impossible if the sheath is made of rigid material, and were it possible, the abrupt increase of calibre at the end of the cover would render the proper insertion of the sound impossible in many cases.

(2) The inflammable nature of a hard rubber or celluloid cover renders a cleansing by the alcohol flame impossible, and as its calibre is small, other means of sterilizing it are more or less unreliable.

The device that has successfully obviated these difficulties in my hands is simply the fusing upon the electrode, after it has been properly bent, a sufficient quantity of pure gum shellac. This makes a perfectly homogeneous instrument, the highly insulating material adhering firmly to the metal and presenting a smooth, hard



surface. It is accomplished by heating the sound over an alcohol lamp until all septic material has been incinerated. It is then hot enough to take the coating of gum from a solid piece held in the hand. The first coating is too thin and should be added to by fusing more shellac and dropping it upon it, and the whole is then brought to a uniform thickness by a gentle reheating over the flame. This leaves a smooth, highly insulating covering, that adheres tightly to the sound and shades off in thickness at the bare end so gradually as readily to admit its passage wherever desired.

Before each subsequent operation this electrode may be thoroughly sterilized and any accidental breaks closed by a reheating of the end in the alcohol flame and a fusing of at least two or three inches of the cover. Before the reheating the proper depth of exposure of the end should be determined upon and the necessary curve imparted to it.

This coating is only adapted to the rigid-shanked Simpson pattern, as shown in the accompanying cut, as after the parts are once covered there should be no danger of bending, which would give rise to unpleasant leaks, the material being quite brittle.



As to the electrode itself, it is sufficient to say that the first two and a half inches at the point are of platinum, to adapt it for use with the positive pole. The flat handle of hard rubber, which seems to have been overlooked by electrode-makers heretofore, fulfils the same important functions as in ordinary sounds.

I have used as much as 400 milliampères repeatedly with this form of electrode without the cover being affected in any way, but its brittleness would doubtless render it an unsafe covering for the electro-puncture needle.

1706 WALNUT ST.

## NEWS ITEMS.

**The Yellow Fever Quarantine.**—Surgeon-General Hamilton, with the approval of the Secretary of the Treasury, to-day issued a circular promulgating the following regulations for the prevention of the spread of yellow fever from certain infected places in the State of Florida:

In accordance with the act of April 29, 1878, and appropriation acts, authorizing the maintenance of quarantine at points of danger, the following regulations are framed to assist in the work of preventing the spread of yellow fever, now prevailing as an epidemic in certain towns in the State of Florida:

1. A camp of refuge for persons from infected places in Florida is hereby established, to be under the command of Passed Assistant Surgeon Guitéras, on the south bank of St. Mary's River, near the crossing of the Savannah, Florida and Western Railroad, to be known as Camp Perry. Temporary quarantine stations are hereby established, under the direction of Surgeon Hutton, Marine-Hospital Service, near Waycross, Ga., and Live Oak, Florida. Those at Dupont, Georgia, and Chattahoochee River Junction are hereby discontinued,

2. At the station aforesaid an inspection will be made of all persons, baggage, mail and express arriving by rail from points south, and in case of arrival of any person, mail, baggage or express matter capable of conveying infection, coming from an infected place or a place not known to be healthy, as shown by recent inspection reports, then such person shall either be returned to the original place of embarkation or to Camp Perry, at his or her option, and the baggage of such person shall be held for fumigation, and fumigated under the direction of the Railway Mail Service, under orders already issued by that service.

3. All persons arriving at Camp Perry will be under the orders of the commanding officer, and will not depart the camp, without permission, until ten days shall have elapsed from the date of their departure from an infected place. A special daily train will run between Jacksonville and Camp Perry for the purpose of conveying persons from Jacksonville, and such other business as may be incident thereto; and, at the expiration of the detention period, they will be taken to Waycross and then allowed to proceed to their destination without further detention.

4. Railway agents, conductors or other persons in

charge of railway trains south of and including those of the Savannah, Florida and Western Railroad will not receive persons from infected places on board trains, except to the refuge camp, as provided in paragraph 1 of this circular, and sleeping cars will not be allowed to proceed south of Waycross, Ga., until the cessation of the epidemic.

An additional refuge camp, under the same regulations as those governing Camp Perry, will be established in the mountains of North Carolina (the site hereafter to be determined) as soon as practicable.

**The Congress of American Physicians and Surgeons.**—In view of the fact that frequent inquiries are made of the Committee of Arrangements by medical men and others in regard to the character of the organization now known as The Congress of American Physicians and Surgeons, which will hold its first triennial session in Washington, September 18, 19 and 20, it is deemed proper to state that several years ago the American Surgical Association passed a series of resolutions declaring it expedient that the special medical societies in this country should adopt some plan of organization by which they should be brought together at certain stated periods, and invited the other societies to coöperate with it in perfecting such a scheme. This invitation was accepted by the several societies, and in October, 1887, a committee of conference, composed of delegates from each of the societies, assembled in Washington and agreed upon a plan of association, which was subsequently considered and accepted by the societies constituting the Congress as now organized. This plan consists simply of the agreement that the medical societies named shall hold their usual annual meetings at the same time in that city every third year, and that an executive committee, composed of one member of each society accepting the agreement, shall

arrange for one or more general meetings for the consideration of such medical subjects, by such physicians and surgeons as it may select, to be followed by such general discussion as time may permit. There is no membership in the Congress proper. Membership belongs exclusively to the several societies constituting the Congress. Each society prescribes its rules for admission of candidates, and transacts its business according to its own method. The Congress, as such, does not in any manner interfere with the autonomy of the several constituent societies.

The guests are men of distinction in some special department of medical science, who have been invited by some one of the constituent societies to attend its meetings, and perhaps to present a paper on some chosen subject. They are guests of a society, not of individual members.

The meetings of the Congress and of the societies will be open to the profession; but the privilege of taking part in the discussions will be limited to the members, guests and those who may be invited to do so by the societies respectively. The invitation to attend the meetings and engage in discussion will not, however, entitle one to the privileges of a guest.

Members and visitors must avail themselves of the ordinary excursion rates of railroad fare.

The Postmaster has arranged facilities for the distribution of the mail at the office of registration, in Willard's Hotel. Letters must be addressed to "The Congress of American Physicians and Surgeons, Washington, D.C."

It may be added, that the Committee of Arrangements decline to make any provision for, or to have anything to do with, any exhibit of pharmaceutical preparations and medical and surgical appliances.

*The Progress of Surgery during the last Half Century* was the title of Sir George Macleod's Address in Surgery at the late Glasgow meeting of the British Medical Association. The most distinguishing features of the period under review, he said, have undoubtedly been anæsthetics and antiseptics. They are both "epoch-making" discoveries. Each has done almost as much for surgery as the discovery of hæmostatics, and when combined may, he thought, be said to excel even steam and electricity in their gracious benefits to mankind. Though from the earliest times men sought for the means of allaying pain during operation, and numerous imperfect methods had been tried to effect it, yet the statements of Velpeau, published in 1839, may be taken as expressing the opinion held seventeen years before the great discovery—"All research for an agent to destroy pain in operations is a mere chimera and unworthy of further consideration." Suddenly, however, the riddle was solved by one who, recalling the experiments of Humphry Davy with nitrous oxide and sulphuric ether, dimly perceived the use they might be put to in surgery. Whatever credit in this matter may belong to the unfortunate Horace Wells, it was really Mr. Morton, who worked out the practical application of ether, and in the theatre of the Boston Hospital may still be seen the sponge by which it was administered on that memorable October morning in 1846. Many of us can still recall the enthusiasm which that discovery evoked, and the unbounded anticipations which it suggested.

Of antiseptics, he said, that notwithstanding all the criticism and opposition which it has met with, the fundamental principles on which it rests remain, in his humble

opinion, unassailable, and that it has led to practical results (not alone in its immediate effects, but in the discussions and studies which it has produced) which have, in an extraordinary degree, widened the domain of our art, diminished the sufferings, and saved innumerable human beings.

The practical application of aseptic surgery has amazingly augmented the importance and value of the surgeon's services, as the advantages of that system cannot be secured without wide knowledge and great assiduity on his part. Perfect drainage; entire rest, both mechanical and physiological (which includes the avoidance of all tension in the wound), and such attention to hygienic and constitutional conditions as will maintain and increase the resistance of the tissues, and of the general system, to the invasion of disease, are essential to the "system" on which wounds are now treated, and demand the most assiduous care from the practitioner. Of the many germicides which have been used I undoubtedly prefer the bichloride of mercury, which, with the soft alembroth lint and Gamgee elastic absorbent wool, are most perfect local applications. Dry and elastic dressings (the many medicated and absorbent wools, cottons and lints now in use) have been, in my experience, most valuable advances in wound management. With reliable antiseptics—that is, agents which are capable of destroying the septic germs, or, at least, inhibiting their development, without, at the same time, causing local or constitutional harm—and with a scrupulous attention to details which must never flag, almost every organ and cavity of the human body may be, and have been, invaded, in some cases, perhaps, with too confident temerity.

Of the treatment of stone of the bladder, he said, for over fifty years lithotripsy has been gaining ground, and since 1878, when Bigelow introduced his litholapaxy, the whole practice has been so changed as to constitute an entirely new operation. The greater capacity of the urethra which Otis demonstrated; the immensely greater tolerance of the bladder to the presence of instruments which Bigelow showed to exist; and the improvements in the apparatus for breaking up and removing the fragments, together with the use of anæsthetics, have all combined to establish the triumph which has undoubtedly been achieved. The extension to young boys (even to infants, as has been lately shown) of the advantages of lithotripsy has also been attained, so that great size and extreme hardness are almost the only obstacles which now stand in the way of its universal application. With a better knowledge of the causes which produce calculus, an earlier recognition of its presence, and the modern system of removing it entirely at one sitting, it may be said that one of the greatest of human calamities has been nearly overcome.—*British Medical Journal*, August 11, 1888.

*Re-implantation of Bone.*—After his Address on the Surgery of the Brain (see THE MEDICAL NEWS of Aug. 18), at the recent meeting of the British Medical Association, Dr. Macewen gave a demonstration of cases so remarkable that it alone would suffice to render the Glasgow meeting memorable in the annals of surgery. Many of the patients whose cases have been described in the address were present, but the many eminent surgeons who attended were greatly interested also in the examples

of re-implantation of bone; the head cases afforded many instances, but the most remarkable was a boy, in whom the whole shaft of the humerus had been reformed from grafts, forming a useful link. The audience was large, and Dr. Macewen was loudly applauded and received numerous congratulations on his brilliant results.—*British Medical Journal*, August 11, 1888.

**Entertainment of the Americans at the Meeting of the British Medical Association.**—A number of British medical men, who visited the United States last year on the occasion of the International Medical Congress at Washington, performed a graceful act of courtesy and gratitude at Glasgow, last week, in the shape of a banquet to the American visitors to the Association meeting. The banquet took place at the Bungalow, in the Exhibition grounds, with Mr. Lennox Browne in the chair. Upward of fifty persons took part in the festival, comprising the majority of the Americans then residing in Glasgow.—*Medical Press*, Aug. 15, 1888.

**Residential Buildings for Medical Students.**—The medical staff of Guy's Hospital, with the consent and full assistance of the governors, have decided to build a residential college for the students. This will be erected on premises within the hospital precincts, on ground on which the first Nonconformist place of worship in London was situated. It is intended for the reception of sixty men, amongst which number will be included the resident staff of the hospital, the house surgeons, house physicians and others, who will be in telephonic communication with the hospital buildings. Every convenience will be provided and amongst other things a gymnasium will be included, for the use of the residents; this is as it should be. The building is calculated to cost £20,000, the whole of which has been already subscribed.—*Lancet*, July 28, 1888.

**"Good Enough for the Hospitals."**—A Spanish magistrate, shocked and exasperated by repeated food adulterations, has issued a proclamation, aflame with righteous wrath, that "all wines, groceries and provisions which, upon analysis, are proved to be injurious to health, will be confiscated forthwith and distributed to the different charitable institutions."—*Boston Journal of Health*, Aug. 1888.

**OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 21 TO AUGUST 27, 1888.**

VOLLUM, EDWARD P., *Lieutenant-Colonel and Surgeon* (U. S. Army).—Leave of absence extended two months.—Par. 17, S. O. 192, A. G. O., August 20, 1888.

ALEXANDER, RICHARD H., *Lieutenant-Colonel and Surgeon*.—Detailed as a member of the Board to meet at San Carlos, Arizona Territory, August 28th, to select a site for a new post at that place.—Par. 1, S. O. 44, *Division of the Pacific*, August 15, 1888.

SMITH, JOSEPH R., *Medical Director and Surgeon*, *Department of Dakota*.—To inspect Forts Pembina, Totton, Buford, Abraham Lincoln and Yates, Dakota Territory.—Par. 4, S. O. 77, *Department of Dakota*, August 13, 1888.

HEGER, ANTHONY, *Surgeon* (U. S. Army).—In addition to his other duties, to attend to the duties of the Medical Director, *Division of the Atlantic*, during the absence of Colonel Charles Sutherland.—Par. 4, S. O. 170, *Division of the Atlantic*, August 18, 1888.

WRIGHT, JOSEPH P., *Major and Surgeon* (U. S. Army).—Detailed as a member of the Army Retiring Board, Fort Leaven-

worth, Kansas, vice A. A. Woodhull, Major and Surgeon, U. S. A., relieved.—Par. 10, S. O. 190, A. G. O., August 17, 1888.

WOODHULL, A. A., *Major and Surgeon* (U. S. Army).—Relieved from duty with the Army Retiring Board, Fort Leavenworth, Kansas.—Par. 10, S. O. 190, A. G. O., August 17, 1888.

AINSWORTH, FREDERICK C., *Captain and Assistant Surgeon* (U. S. Army).—To proceed to Atlanta, Georgia, and inspect the new Army Hospital at that place.—Par. 18, S. O. 192, A. G. O., August 20, 1888.

MAUS, LOUIS M., *Captain and Assistant Surgeon* (U. S. Army).—Having completed rifle practice at Camp S. B. Luce, Fisher's Island, New York, to return to his proper station (Fort Schuyler, New York Harbor).—Par. 3, S. O. 171, *Division of the Atlantic*, August 20, 1888.

OWEN, W. O., Jr., *Captain and Assistant Surgeon* (U. S. Army, Fort Leavenworth).—To report for temporary duty to the Commanding Officer, Fort Gibson, Indian Territory.—Par. 1, S. O. 104, *Department of the Missouri*, August 20, 1888.

MASON, CHARLES F., *Assistant Surgeon* (U. S. Army).—Ordered to Fort Washakie, Wyoming Territory, for duty.—Par. 5, S. O. 190, A. G. O., August 17, 1888.

**OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING AUGUST 25, 1888.**

SIMONS, MANLY H., *Surgeon*.—Detached from the "Constellation," and ordered to the Naval Academy.

RUSSELL, A. C. H., *Passed Assistant Surgeon*.—Detached from the "Constellation," and ordered to the Naval Academy.

DICKSON, S. H., *Passed Assistant Surgeon*.—Detached from the Marine Barracks, Washington, D. C., and ordered to the U. S. S. "Richmond."

CORDEIRO, F. J. B., *Passed Assistant Surgeon*.—Ordered to the U. S. S. "Mohican."

FARWELL, W. G., *Surgeon*.—Detached from the U. S. S. "Saratoga," and ordered home to wait orders.

DICKINSON, DWIGHT, *Surgeon*.—Detached from the U. S. S. "Portsmouth," and ordered home to wait orders.

**OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING AUGUST 27, 1888.**

SAWTELLE, H. W., *Surgeon*.—Directed to proceed to San Diego, Cal., and inspect Service at said station, August 17, 1888.

HUTTON, W. H. H., *Surgeon*.—To proceed to Way Cross, Ga., and assume charge of inspection and fumigation stations, August 17, 1888.

URQUHART, F. M., *Passed Assistant Surgeon*.—To report to Surgeon Hutton for special duty, August 19, 1888.

GEDDINGS, H. D., *Assistant Surgeon*.—Appointed an Assistant Surgeon August 18, 1888. To report to Surgeon Hutton for special duty, August 19, 1888.

WERTENBAKER, C. P., *Assistant Surgeon*.—Appointed an Assistant Surgeon August 18, 1888. Assigned to duty at the port of Norfolk, Va., August 20, 1888.

STONER, J. B., *Assistant Surgeon*.—To proceed to Charleston, S. C., for temporary duty, August 20, 1888.

GUITERAS, JOHN, *Passed Assistant Surgeon*.—To proceed to St. Mary's River, Fla., establish and take command of refuge camp at that point, the camp to be known as Camp Parry, August 20, 1888.

**THE MEDICAL NEWS** will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.